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TRANSACTIONS

FOR THE YEAR 1891,

OF THE

Essex Agricultural Society,

ORGANIZED 1818.

FOR THE

COUNTY OF ESSEX,

IN MASSACHUSETTS,

AND ITS

Sixty-Eighth Annual Address,

BY

HON. WILLIAM H. MOODY,

OF HAVERHILL.

With the Premium List for 1892.

PUBLISHED BY ORDER OF THE SOCIETY.

SALEM, MASS.:
OBSERVER BOOK AND JOB PRINT.
1891.

MASSACHUSETTS AGRICULTURAL COLLEGE

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ANNUAL ADDRESS.

BY HON. WILLIAM H. MOODY.

An examination into the reports of your Society discloses that those who have been selected to deliver the annual address have been given a wide scope in the choice of subjects. It seems not to have been your purpose to confine the speakers to purely agricultural subjects. You seem to have taken all knowledge for your province, and to have encouraged the discussion of any matter which touched the public well being. It would be idle to expect those, whose days are busy in other avocations, to enlighten you, where your own resources of information are far superior. In the old and more leisurely days, the professional man was often a practical farmer as well, but the exacting demands of modern life compel from each the most constant attention to his own occupation. By the necessity of ignorance, I am forbidden to address you upon any subject relating to the cultivation of the soil, and your invitation was given and accepted with full knowledge of this limitation. I shall, however, endeavor to interest you in matters with which I am, or ought to be, somewhat familiar, and which are of practical concern to us all.

At first sight it might appear that, of all persons in the world, the members of the Essex Agricultural Society would be the least interested in questions concerning the criminal law; but yet, when we consider the great importance to the community in which we live, of checking and control-

ling the rising tide of lawless acts, and of lessening the financial burden which the existence of the criminal class and the necessity of the detection and punishment of crime casts upon each member of the community, I think I need not excuse myself further for addressing you upon the administration of the criminal law, with the purpose of suggesting for your consideration some changes which it appears to me the well being of the community demands.

There is no surer way of attracting a man's attention than by touching his purse, and we will first ascertain as well as we may what it costs the County of Essex to detect and to punish crimes; and in this consideration, we must omit altogether the enormous indirect financial burden upon the community by reason of the existence of a class of persons who add nothing to production and are worse than mere drones in the community.

The following table shows the receipts and expenditures of the County in respect to the enforcement of the criminal law for the year 1890.

INCOME.

Gross income of four jails,	$15,070 71	
Bonds, costs and forfeitures paid by persons convicted to the Superior and lower courts,	40,677 65	
Total Income.		$55,748 36

EXPENDITURES.

Cost of maintenance of four jails and houses of correction,	$75,826 13
One-half cost of maintenance including salaries of the Lawrence and Newburyport Court Houses,	1,100 85
One-fourth cost of maintenance including salaries of Salem Court House,	2,323 15
One-third cost of maintenance including salaries of Clerk of Courts office,	3,883 96

Grand Jury pay roll,	1,302.36	
Traverse Jury pay roll,	5,125.74	
Paid officers for attendance at court and for summoning jurors,	1,617.06	
Two-thirds cost of maintenance including salaries of police and district courts,	16,777.28	
Amount expended for witnesses in the superior criminal court,	6,068.98	
Costs paid district and police courts,	30,326.70	
Capias and subpœnas,	298.09	
Salary of assistant district attorney and printing,	1,455.99	
Transportation of prisoners and convicts,	1,413.81	
Fees of medical examiners and for inquests,	2,469.07	
One-half Sheriff's salary,	1,000.00	
One-third expense of County Treasurer's office including salaries,	910.19	
Fines paid to complainants,	125.00	
Total expenditure,		$152,024.36
Total income,		55,748.36
Balance of expenditure over income,		$96,276.00

This table, perhaps, needs a word or two of explanation. One-half of the expense of maintaining the Lawrence and Newburyport court houses is charged to the criminal court because of those two houses, at least one-half the use is for the transaction of criminal business. On the other hand, one-fourth only of the expense of maintaining the Salem court house is charged in this account to the administration of criminal law, although I doubt whether this is an adequate proportion. Two-thirds of the cost of maintenance of the police and district courts I have charged in this account because it seems that at least two-thirds of the uses of those courts are in administering criminal law. The same considerations apply to the estimated proportion of the sheriff's salary and the expense of the county treasurer's office. Of course these propor-

tions are rough estimates but, it seems to me, not unfair ones.

The county tax during the year 1890 paid by the various cities and towns to the county treasurer was $205,000. You will thus see that nearly one-half of the amount raised by taxation for county purposes was spent directly in the detection and punishment of crime within the County of Essex.

The county commissioners last year appraised the jail property of the county at $593,702. Add to this, say one-third of the appraised value of the court house property, $120,880, and there is 714,582 dollars worth of real estate devoted to the administration of criminal law. There is no income from this property except as allowed for in the above statement I have given you. If it is true, as real estate owners say, that all real estate investment ought to produce a gross income of ten per cent. in order to be as profitable as other kinds of investments, then you have an addition of interest account to the amount of $71,258.20; and your direct yearly outgo, based upon the year 1890 is $167,734.20. But the expense by no means stops here. As tax payers, you pay through the Commonwealth the salaries of the judges, of the district attorney, and of the state police, and your part of the large expense of the construction and maintenance of the various state prisons and reformatories. If you will look at the account of the expenses of the cities and towns in which you live and pay taxes, especially those of you who pay taxes in cities, you will see the large amounts of money which are yearly required for the maintenance of an efficient police.

I think that few adequately know or appreciate the weight of the financial burden upon the law abiding people

of the community, which the existence of a lawless and criminal class imposes. I have called your attention to it, not for the purpose of criticising the expenditures, which I believe are carefully made and rigidly scrutinized by the public servants, but only that you might see the importance of the subject to all, and the necessity that exists for intelligent and right-thinking men to give their best thought to those questions of reform in our methods of dealing with criminals, which are brought every year to the legislature for its consideration.

Moreover, it is idle to complain of public expenditures in the gross, we must attack them in detail. To change a homely expression we must save at the spigot as well as at the bung hole. We must cut off useless and expensive formalities and delays, abolish bad methods, and improve good ones. This demands criticism. Intelligent criticism [and any other is worse than useless] requires knowledge, attention and thought.

A statute passed last winter will illustrate my meaning and show the necessity of attention to questions relating to the treatment of criminals, by people who will consider the subject with some reference to the question of public expense. Chapter 356 of the Acts of 1891 provides for the appointment for each of our police and district courts of a probation officer, whose duty it is to investigate into the nature of every criminal case brought before the lower courts, and in proper cases, to recommend to the Justice of the court that the offender be placed on probation during his good behavior. The salary of this officer is paid from the county treasury and he is forbidden to do other police work.

In the County of Essex, this law compelled the appoint-

ment of seven probation officers at a yearly expense to the county of sixty-four hundred dollars. While in Suffolk county it may be necessary to appoint a number of these officers, in my judgment in the County of Essex, no such necessity exists, and the amount of money devoted to their compensation is so much money thrown away. I do not wish to be understood as opposing a thorough examination into all criminal cases before sentence. One of the most important duties of those who have in charge the prosecution of offences is to know when not to punish. But the work now performed by the probation officers could be, and to a large extent was, before the passage of the law, performed by the city marshals and chiefs of police without any extra compensation whatever. It never has been, according to my experience, the practice of any judge to impose a penalty upon an offender without as extensive a knowledge of his history and surroundings of any kind as was possible. Public opinion needs but to be informed to demand and secure the repeal of this law, in the interest of economy.

A reference to the figures which I have given you in regard to the expenses and income of our penal institutions, shows that the cost of keeping a convict in confinement far exceeds the value of his labor. It is not likely that the gross cost of maintaining the houses of correction will be lessened, and in the present condition of public sentiment, the returns from convict labor are more likely to be decreased than increased. Public sentiment has condemned the employment of convict labor in any way which will bring it in competition with free labor, or which will tend to diminish the returns of the free laborer from his work. Whatever we may think of it, this is a senti-

ment which cannot be controlled and overcome. It has found voice in the legislation of the Commonwealth, and each year the lawful employment of convicts is restricted within narrower limits.

An excellent example of the tendency of this legislation is furnished us in a neighboring county. Within the house of correction at Cambridge, the manufacture of brushes by the convicts had grown to be a profitable business, and the returns from this manufacture largely decreased the prison expenses of the County of Middlesex. But a statute passed last winter restricted the number of prisoners to be employed in this industry to fifty, and the result is said to have been that the industry is practically destroyed, and the expense of the prison must be met hereafter in some other way.

The employment of prisoners on some kind of labor is a humane necessity for their moral and physical well being, and it may well be that in the near future, in order to find adequate employment for its convicts, the state will be compelled to undertake public work of a kind which will not come in competition with free labor. In what direction shall we look for such employment. Is there any public work, which would not be undertaken at all if free labor had to be employed, which would furnish occupation for the convict, and be of benefit to the state.

The roads of New England are considered to be among the worst in the world, and probably will continue to be so unless a vast system of reconstruction is begun, and in time, completed. Their maintenance is a source of expense, and their condition imposes an indirect tax upon the owner of every horse and vehicle. I commend to your thoughtful consideration whether it would be wise to employ those convicts who are imprisoned for short terms and for minor

offences upon the work of reconstruction of our highways, always carefully seeing to it that the work done by them is beyond and above that which would otherwise be done by free labor. I have not given the subject sufficient thought to advocate this proposition, and I can only say that it has been elsewhere tried with success, both in securing better highways and diminishing a certain class of convicts whose worst punishment is hard work. At least one member of the board of county commissioners has examined this plan, endorses it, and has unsuccessfully advocated it before different committees of the general court.

But we may expect to find in the methods of inquiry and trial used by the criminal law, rather than in the methods of punishment, practices which are unduly wasteful and cause expensive delays and miscarriages of justice, and this especially because of the history of the origin of the law and the many rigid rules which have restricted the freedom of its development.

The great body of our criminal, as of our civil law, was brought across the waters by our forefathers from England and from that time to the present, the development of its rules has proceeded upon both sides of the water, naturally diverging somewhat, but in the main, today, presenting systems substantially identical. Many, if not most, of the rules governing the administration of criminal justice originated and became fixed at a time when offences were punished with ferocious severity. At the opening of this century in England, offences which would now be deemed almost trivial, were punished by death. Prisoners upon trial were not allowed the benefit of counsel, and were not permitted to testify in their own behalf. The prosecuting power itself seemed something apart from the people.

As an offset to these disadvantages, judges and juries

sought to avoid the results of this terrible code, by interposing between the prisoner and conviction all manner of nice and subtle technicalities. The prisoner not only could not testify in his own behalf, but on the other hand, the government was not permitted to inquire of him with respect to the crime with which he was charged.

But the law has become more humane. The atrocious penalties of former times have been abolished. The people have taken into their own hands the prosecution of offenders, with the determination that no man shall be unjustly convicted and punished. The prisoner is permitted at all times to testify in his own behalf, and deny and explain any evidence that may be produced against him. In short, the accused needs no longer the protection of technicalities and subtleties, but may rely with confidence upon the fairness of the prosecuting officers, the learning of the judges, and the determination of the jurors to see that justice is done between the Commonwealth and him. I believe the time has come when we can afford to sweep away many of the rules of the criminal law which have grown up in other times and under other circumstances, and which not only afford a shelter for the guilty, but increase largely the expense of the administration of the law.

I propose to discuss one or two venerable rules of the criminal law, and ask you to consider with me whether they could not, with profit to the community, be changed or abolished. But before so doing, I wish to refer to a detail of practice, the continuance of which shows how much easier it is to let things alone than to question and change them. You probably are aware in a vague sort of way that, with reference to the power of the courts to pass sentence upon offenders who have been found to be guilty,

there are three classes of cases: first, a class of minor offences in which the judges of the police and district courts have the duty of imposing a penalty if the accused is found guilty, always subject to his right to an appeal and to a trial by jury; that there is a second class of cases, somewhat more serious in their nature, in which the judges of the lower courts have what is called concurrent jurisdiction, that is either the power to impose a penalty within certain limits, or to bind over the accused to await the action of the grand jury; and that there is a third class of cases where the power of the magistrate of the lower court is confined simply to committing the accused to await the action of the grand jury, and to answer to their presentment in the superior court.

On the first Monday of October next, experience tells me that there will come for the consideration of the grand jury, a certain number of cases where the defendants have been accused in the lower courts of crimes not within the power of those courts to punish, and there have solemnly pleaded that they were guilty. Under the law, the cases must still be brought to the grand jury and proved against the defendant, an indictment found, returned to the superior court, and disposed of there. In the meantime, a man who has pleaded guilty in May or June may be kept in confinement until October, simply because no provision is made by the law for the speedy punishment of a man who has confessed that he is guilty and is ready to take the sentence which the law affixes to his crime. Consider what an amount of useless and expensive work is done. The prisoner is confined at the expense of the county for perhaps several months. It is an injustice to him as well. The time of the grand jury, itself valuable and expensive, is

occupied in the performance of useless formality. The punishment of his offence which might have been useful as an example to others, is deferred until perhaps the reason for it is forgotten and the value of the example is lost. Thus, if a man commits a crime serious enough, it seems to be considered that he deserves well of the Republic, and is entitled to a certain amount of solemn trifling, even if it is expensive to the people and burdensome to himself. I believe that all this could be remedied, that provision could be made for sentencing offenders who have pleaded guilty, forthwith after they have confessed their guilt, either by judges of the lower court, or by some judge of the Superior Court sitting at some other time and place than a regular session of that court.

The constitution of Massachusetts provides that "no subject shall be held to answer for any crimes or offence until the same is fully and plainly, substantially and formally described to him." This was the rule of common law, and our ancestors thought it of importance enough to the citizen to deserve a place in our Bill of Rights. Let us consider for a moment the practical working of this rule. In the first week of October next, the grand jury will have to consider accusations made against probably something more than one hundred persons. They are aided in their deliberations by the advice of the district attorney and his assistant, and the indictments which they find are drawn as accurately as the nature of the case will admit by those officers. After their deliberations are concluded, the grand jury report their indictments to the court, and adjourn. They have considered over a hundred cases of which they knew nothing at all at the beginning of their sitting. They have had but a week to consider the evidence, and make up their judgment, and cause the indictments to be drawn.

It is important and necessary that every name in the indictment should be almost absolutely correct, that every piece of property named in the indictment should be accurately described, and that the indictment should charge the crime with precision and fulness. If, after the grand jury has adjourned, it is discovered that it is charged against a thief, that he "did steal, take and carry" certain goods, the indictment is imperfect, because it should have been charged that he "did steal, take and carry away" the goods. If he is charged with the larceny of a certain number of bottles of whiskey, and the proof shows that the whiskey was not stolen in the bottles but was drawn by the thief into the bottles from the casks of the owner, he must be acquitted. If he is charged with the adulteration of a "certain substance intended for food, to wit, one pound of confectionery," the indictment is insufficient because it should have been alleged what kind of confectionery he adulterated. If he is charged with stealing a number of different articles of a certain collective value, and the jury find that he stole all the articles but one, he must be acquitted, although if the same articles had been alleged to have been of separate values, he may be convicted for those which the proof shows he actually did steal, although the values may not be accurately stated. If he is charged with an assault upon John Smith and it appears that the assault was upon John A. Smith, he must be acquitted. If he is charged with maintaining a building as a liquor nuisance, and it appears that he occupied a part only of the building, he must be acquitted. And in all these cases, justice has not been done, and great expense has been incurred. These are not fanciful cases, but are taken almost at random from the decisions of our Supreme Court.

I believe that this could be remedied without in any way

imperilling the rights of the citizen, and to the great financial benefit of the community. Preserve if you will, all the technical requirements of the law in the drawing of indictments; describe the offence fully, plainly, substantially, and formally. But after the grand jury has once passed upon the question of guilt or innocence, permit the proper officer of the court under such restriction as the judge may deem necessary to protect the rights of the accused, to amend the indictment, as the pleadings in a civil action may be amended, in order that the true crime which the grand jury intended to present for trial may be accurately and legally expressed. Thus the spirit of the constitution would be observed, and the grotesque results which are a reproach to our civilization would be avoided.

Perhaps the most striking peculiarity of the law which governs all English speaking people is that which forbids the government to call the accused person as a witness against himself. The contrast between this rule and the practice which prevails in other countries was, not long ago, curiously emphasized in the minds of those who followed in the public press the accounts of two important trials proceeding at the same time; one the trial of a man and woman in France for the strangling of their victim, and the other the trial of Isaac Sawtelle in the neighboring state of New Hampshire for the murder of his brother. In the former case the prisoners were not only examined by the government's counsel, but were subjected to rigid examination by the presiding judge, who mingled with his questions a running fire of comment upon the prisoners' answers; and finally the trial appeared to degenerate into a debate in which judge, counsel, witnesses and prisoners took part This examination was not by consent of the prisoners.

At the same time in New Hampshire, many days were consumed by the court in carefully inquiring whether the prisoner was in that State on certain days and nights, and there killed his brother. And throughout the trial, no one asked the prisoner a single question about a single fact connected with the case. And moreover, although he sat silent under the accusing evidence, no one suggested to the jury that his silence under these circumstances, his failure to contradict testimony which, if false, he could easily do, created any presumption against him.

In the dignity and decorum befitting a court of justice, the American trial was immeasurably superior to the French trial. Yet in spite of this, is there not something worthy of consideration in the contrasting methods? A two hours' examination of Isaac Sawtelle by the attorney general of New Hampshire would probably have accomplished more toward discovering his guilt or innocence, than all the rest of the evidence together accomplished.

To trace the origin and growth of the rule that no man is bound to incriminate himself will certainly prove interesting to the student of social science, but is too far apart from the purposes of this discussion to be undertaken here. The rule certainly did not exist in England for a half century after the first settlement of New England. However it originated, it has become firmly fixed in our jurisprudence and holds a place in the Massachusetts Bill of Rights, which provides that "no subject shall be compelled to accuse or furnish evidence against himself." To dispute the wisdom of a principle sanctioned by the constitution and by two centuries of almost unquestioned existence, requires something of temerity. But a righteous institution can endure criticism and profit by it, while none other has a right

to complain. Many of you can remember when a trial at law was fettered by rules of evidence which now seem to have been designed to conceal the truth, so devious and uncertain were the paths through which truth was sought. Parties to a civil suit, those interested in its result, persons whose religious beliefs did not conform to the standards of the times, and persons who had been convicted of crime were absolutely excluded from the witness stand, and a person accused of crime was neither compelled nor permitted to testify upon his trial.

With fear and hesitation, these restrictive rules have from time to time been abolished, until the one under consideration alone remains. After many years of agitation, parties to civil suits and persons interested were permitted to testify, although many predicted that the courts would be overrun by false and fraudulent claims, and that no one would be protected against the perjury of his neighbor. But the experience of many years has shown that this fear was unfounded, that men and women will not willingly commit perjury, and that jurors are entirely competent to judge what weight should be subtracted from the testimony of the party on account of his interest in the result of the litigation.

When the privilege of testifying in his own behalf was extended to a prisoner, it was feared that this privilege would afford a protection and a shield for the guilty, but the result has been far different, and has proved practically to be a great benefit in an unexpected direction. The right to testify has not only protected those unjustly accused of crime, but in a much greater degree has rendered certain the conviction of those justly accused of crime; for it is the almost unvarying experience that when a guilty man avails himself of his right to testify, his examination furnishes the most convincing proof of his guilt.

When this privilege of giving testimony was accorded to the accused, it was carefully provided, in deference to the constitutional provision which we have under consideration, that his neglect or refusal to testify should not create any presumption against him, and juries are always carefully instructed not to allow the refusal of the accused to take the stand in his own behalf to affect their judgment unfavorably to him. But it has been shown in this case as in all others that we cannot legislate against the laws of thought. And however faithfully judges, counsel or jurors may endeavor to heed this caution of the law, it is impossible to see a man sit silent under accusing evidence, which he could contradict if it were untrue, and to consider that silence as devoid of all significance. If a man does not reply to the accusations against him, it is in truth an argument that they are true. No man can help seeing it as such, and the law in its search for the truth ought to give it due weight.

It is but a step further to require the accused to testify under oath upon his trial, at the call of the government. Society is engaged in a life and death struggle with its enemies, and it seems almost folly to discard from its armory a weapon so potent as this. The innocent need fear no open and straightforward methods of inquiry into the truth, and what is it to us that the guilty object? Torture and the kindred institution of secret inquiry in the cell, threats and misrepresentations to a prisoner, are all abhorrent to the spirit of our institutions. But the time has come to consider, not hastily, but deliberately, whether our constitution should not be so far modified as to permit the people, when through their representatives they have accused a man of a crime, to inquire of him under oath and in open court

whether the facts which criminate him are true or not. That no man was bound to furnish evidence against himself, in other times, may have been a shield for the innocent, but to-day it is a shelter which the guilty alone seek. If this shelter were destroyed, the punishment of crime would be more speedy and certain. It is not the severity but the speedy certainty of punishment which deters. When justice follows offence with halting and uncertain step, then crime flourishes and criminals multiply.

There are other matters of interest in the administration of criminal law to which I should like to call your attention if time permitted. I should like to dwell upon its merits as well as its defects. My justification in speaking of these things to you is that they are matters of practical concern to you all, and of especial importance to the County whose name your society bears. They are matters upon which the public mind does not commonly dwell, and it is only by now and then directing it to these neglected corners of the social fabric that that thought and discussion arises which is so essential to progress toward stronger and better institutions. It is only by arousing the interest and attention of the people that reforms in our social methods can be attained. The old times in Essex County when a crime was so rare that it startled the neighborhood in which it occurred, have passed away, and there is to-day a constant struggle between the community and the evil doers in its midst. The methods which were satisfactory a half century ago are inadequate to-day. Although I may not have convinced you of the truth of any of the propositions I have attempted to maintain, yet if I have in any degree directed your attention to a subject of great and increasing importance, I have in some measure repaid you for the honor which this invitation has done me.

SEVENTY-FIRST

Annual Cattle Show and Fair.

The Cattle Show and Fair of this Society opened Tuesday, Sept. 22, 1891, at Lawrence,—the first time for thirteen years,—under very favorable circumstances, although in the morning appearances indicated rain, which made some of the entries late in arriving.

The City Government and citizens generally worked with a will and tried in every way to lend their assistance so as to make the show a success, and they succeeded in a marked degree.

The entries in some of the departments were notably less than they have been in some years previous, but the stock was all of the first quality, noticeably the horses and colts, and in some departments, especially in the hall and agricultural tools, many large entries were entered as collections, which reduced the number of entries as compared with the last few years.

In the ploughing match this year the entries were on an average with former years, but more work was done with sulky ploughs than usual, and it was fully up to the standard of our Essex County farmers.

In the exhibition hall the exhibits were fully up to the standard of previous years, and as a rule the several committees found it difficult to decide on the merits of fruit and manufactured articles, the general standard being so high.

On Wednesday, Sept. 23, the annual address was delivered by Hon. William H. Moody, before a large audience, in Trinity church, the subject being "Criminal Law," which was listened to with marked attention.

The Scripture reading and prayer by Rev. W. A. Keese of Lawrence, were very appropriate for the occasion, as was also the excellent singing by the quartette.

After the conclusion of the services in the church, the annual dinner was served in Porter's Hall, after which President Ware called the assemblage to order and made introductory remarks, and introduced Hon. William Cogswell, President elect Francis H. Appleton, Judge Sherman of the Superior Court, and others, all of whom contributed very interesting and pleasant remarks concerning the history of the Society, and its work now and in the future, and agriculture in general.

The Grange Exhibit in the vestry of the church opposite the hall was a new feature this year, and was a good show of itself. It created a feeling of interest and was an attraction to the general Fair.

The entries in the several departments of the Fair for 1891, and 1890 at Beverly, are tabulated for comparison as follows:

STOCK, IMPLEMENTS, ETC. ON FREE SHOW GROUNDS.

Class.	Entries in 1891.	From Different Places in 1891.	Entries in 1890.	From Different Places in 1890.
Fat Cattle,	6	3	2	2
Bulls,	9	4	5	3
Milch Cows,	12	2	13	3
Herds of Milch Cows,	3	2	1	1
Heifers, Pure Bred,	23	4	16	5
Heifers, Native or Grade,	17	5	12	5
Heifer Calves, Pure Bred,	3	2	3	2
Heifer Calves, Native or Grade,	10	3	6	3
Working Oxen and Steers,	12	4	9	5
Steers,	4	3	2	2

Class.	Entries in 1891.	From Different Places in 1891.	Entries in 1890.	From Different Places in 1890.
Stallions, Farm and Draft,	0	0	1	1
Town Teams,	0	0	1	1
Stallions, Driving Purposes,	2	2	12	8
Brood Mares, Farm and Draft,	4	3	3	3
Brood Mares, Driving Purposes,	13	8	6	5
Family Horses,	13	10	8	6
Gent's Driving Horses,	6	4	7	4
Farm Horses,	6	4	12	7
Pairs Farm Horses, over 2500 lbs.,	2	2	3	3
Pairs Farm Horses, less than 2500 lbs.,	5	4	6	3
Colts, Farm and Draft,	6	5	10	5
Colts, Driving Purposes,	30	10	28	14
Swine, Large Breed,	12	6	16	2
Swine, Small Breed,	2	2	6	1
Sheep,	3	2	2	1
Poultry,	31	9	109	9
Harrows for Trial,	3	2	2	2
Agricultural Implements,	13	5	*234	4
Carriages,	3	2	8	3
Ploughing,	15	9	15	5
Total on Free Show Grounds,	268	20	458	23

*Entered in collections in 1891.

EXHIBITS IN HALL.

Class.	Entries in 1891.	From Different Places in 1891.	Entries in 1890.	From Different Places in 1890.
Dairy,	3	3	7	3
Bread and Canned Fruit,	50	14	65	12
Honey,	2	2	19	4
Pears,	192	16	216	17
Apples,	215	16	178	17
Peaches, Grapes and Assorted Fruit,	83	12	105	10

Class.	Entries in 1891.	From Different Places in 1891.	Entries in 1890.	From Different Places in 1890.
Flowers,	70	13	155	11
Vegetables,	369	19	327	22
Grain and Seed,	23	9	14	7
Counterpanes and Afghans,	70	7	119	11
Carpetings and Rugs,	40	8	103	11
Articles Manufactured from Leather,	4	2	21	6
Manufactures and General Mdse.,	28	5	29	7
Fancy Work,	188	12	329	13
Work of Art,	99	7	178	10
Work of Children under 12 years of age,	9	3	38	10
Special Premium,	91	13		
Grange Exhibit,	5	5		
	1541	31	1633	29

Grand total, 1809 entries from 31 out of 35 towns and cities in Essex County against 2383 entries from 31 cities and towns last year. Gloucester, Manchester, Nahant and Wenham did not have exhibits this year. The entries were Andover, 125 ; Amesbury, 47 ; Boxford, 76 ; Beverly, 13 , Bradford, 15 ; Danvers, 48 ; Essex, 8 ; Georgetown, 7 ; Groveland, 23 ; Hamilton, 14 ; Haverhill, 135 ; Ipswich, 4 ; Lawrence, 457 ; Lynn, 56 ; Lynnfield, 4 ; Marblehead, 7 ; Merrimac, 1 ; Methuen, 227 ; Middleton, 16 ; Newbury, 88 ; Newburyport, 8 ; No. Andover, 240 ; Peabody, 64 ; Rockport, 7 ; Rowley, 13 ; Salem, 7 ; Salisbury, 5 ; Saugus, 7 ; Swampscott, 15 ; Topsfield, 28 ; West Newbury, 54.

REPORT OF THE ANNUAL MEETING.

The Society met in the Court House in Lawrence, Sept. 22, at 10 o'clock, A. M., President Ware in the chair.

William S. Phillips, jr., was appointed secretary pro tempo.

The marshals with Col. Melvin Beal of Lawrence as chief, were sworn in by the president.

Vacancies in committees were filled.

Voted that the chairman appoint a committee of three to receive, sort and count the votes for officers for the ensuing year.

Messrs. Francis H. Appleton, Asa T. Newhall and S. W. Hopkinson were appointed.

Committee reported whole number of votes cast, 112; necessary for a choice, 57.

FOR PRESIDENT.

Benjamin P. Ware of Marblehead, had 54 votes; Francis H. Appleton of Peabody, had 45: Thomas Sanders of Haverhill, had 11: Asa T. Newhall of Lynn, had 2.

FOR VICE-PRESIDENTS.

James J. H. Gregory of Marblehead, had 110; James P. King of Peabody, had 108; O. S. Butler of Georgetown, had 108: Aaron Low of Essex, had 61; T. C. Thurlow of West Newbury, had 50; Scattering, 2; and Messrs. Gregory, King, Butler and Low were elected.

FOR SECRETARY.

John M. Danforth of Lynnfield, had 112.

There being no choice for president, Mr. Ware declined to have his name used, and the secretary was instructed unanimously to cast one ballot for Francis H. Appleton and Mr. Appleton was declared elected.

During the counting of votes, Rev. O. S. Butler eulogised the several members who have died during the year and it was voted, that the president and secretary with such others as they may choose, be a committee to prepare suitable resolutions to be printed in the transactions.

Voted, to adjourn this meeting to the call of the president at the dinner to-morrow, Sept. 23.

Sept. 23rd, after the annual dinner, the president called the Society to order, according to adjournment, and reviewed the work of the society for the past sixteen years since he had been its presiding officer, and thanked the members for the courtesy and co-operation they had shown him, and introduced Mayor Collins of Lawrence, who welcomed the Society and Fair to Lawrence in behalf of the city.

Hon. William Cogswell was then introduced who made an address and quoted statistics showing the increased agricultural products in the county, and also in Massachusetts, with the general prices received for the products east and west and concluded by saying he thought there was as good a chance for the farmer in Essex County as anywhere.

Judge Sherman and others made pleasant remarks in response to invitations, after which, on motion of Mr. Butler, a unanimous vote of thanks was passed to the Mayor and City Government of Lawrence for courtesies extended, to Rev. W. A. Keese and officers of Trinity church for its use, to the police force, and to the Boston & Maine Railroad for freight and other facilities offered the Society.

Voted, that the reports of the several committees making awards to exhibitors and competitors be accepted and confirmed, provided the rules of the Society have been complied with.

Report of Committees.

1891.

FAT CATTLE.

The Committee on Fat Cattle have attended to their duties and respectively report to the Secretary that they have made the following awards:

$8. First premium, to James C. Poor, No. Andover, for fat oxen.

$6. Second premium, to Daniel A. Carlton, No. Andover, for fat oxen.

$3. Third premium, to J. P. Little, Amesbury, for fat steers.

William Thornton, Charles H. Leach, W. H. Butters, Calvin Rea—*Committee.*

BULLS.

The Committee on Bulls have attended to their duties and respectfully report to the Secretary that they have made the following awards:

$4. First premium, to W. F. Kinsman, Ipswich, for Jersey bull, "Francines Redire," No. 28,101, 1 year old.

$8. First premium, to J. D. W. French, No. Andover, for Ayshire bull, "Ravenwood," No. 4323, 5 years old.

$8. First premium, to Shattuck Bros., No. Andover, for Holstein bull, 4 years old.

$4. Second premium, to Wm. A. Russell, No. Andover, for Holstein-Fresian bull, "Royal Shepard," No. 17,507, 2 years old.

$2. First premium, to J. D. W. French, No. Andover. for Ayshire bull calf, "Rosewood."

$2. First premium, to J. C. Poor, No. Andover, for Holstein-Fresian bull calf, "Essex Andinus."

$4. First premium, to E. C. Little, Haverhill, for Holstein bull, 15 months old.

$4. First premium, to F. H. Foster, Andover, for Guernsey bull.

To best bull of any age or breed with five of his stock.

$10. Premium to J. D. W. French, No. Andover, for his Ayshire bull, "Ravenwood," No. 4323, Ays. H. B.

B. F. Barnes, Charles Haseltine, William Little—*Committee.*

MILCH COWS.

The Committee on Milch Cows have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$10. First premium, to Leverett Swan, Methuen, for short horn cow, age 9 years.

$10. First premium, to J. D. W. French, No. Andover, for Guernsey cow, "Pops Sweetheart," No. 2298, age 7 years.

$10. First premium, to J. D. W. French, No. Andover, for Ayshire cow, "Julianna," No. 8541, age 5 years.

$4. Second premium, to J. D. W. French, No. Andover, for Ayshire cow, "Mildred," No. 8547, age 5 years.

$10. First premium, to James C. Poor, No. Andover, for Holstein-Fresian cow, "Betty 2nd," No. 1770, 9 years old.

$10. First premium, to James C. Poor, No. Andover, for cow giving most milk in one month, Holstein cow, "Betty."

$10. First premium, to J. D. W. French, No. Andover for Grade cow, "Marble," 4 years old.

$15. Special premium, for best cow of any age or breed, to Wm. A. Russell, No. Andover, for Holstein-Fresian cow, "Queen Ruiter," No. 4488, 6 years old.

STATEMENT OF LEVERETT SWAN, METHUEN.

The short horn cow, I enter for premium, was raised in Vermont, age 9 years, record of milk for one year from Oct. 1, 1890, 5233 quarts. Feed, pasture and fall feed in summer with 2 quarts corn meal and 1¼ bushels brewer's grain per day.

Thomas H. O'Neil, Allen Smith, A. M. Robinson, William C. Sleeper—*Committee.*

STATEMENT OF J. D. W. FRENCH.

The feed has been moderate, the chief object being to keep the animals in good breeding condition rather than to force them to make a large milk record.

In summer the feed has been pasture, and in addition, beginning generally in August, green fodder or bran, 2 to 4 quarts. In winter hay, 8 quarts mangolds, and 4 to 6 quarts dry grain has been the average feed for cows in milk.

The Guernsey cow, "Pops Sweetheart," dropped her last calf Oct. 9, 1890. Milk record from Oct. 9, 1890 to Sept. 1, 1891, 4648½ lbs.

Milk record for Ayshire cow "Julianna," for the month of August, 1891, 956 lbs., weight of cow, 875½ lbs.

Milk record for Ayshire cow, "Mildred," in 1890, 5888 lbs., first 10 days of Sept., 1891, 379 lbs.

Milk record for Grade cow, "Marble," dropped her last calf Jan. 20, 1891, yield of milk in 253 days, 5087 lbs.

STATEMENT OF JAMES C. POOR.

The summer feed for these cows has been pasture with 2 quarts cotton seed meal once a day, and since Aug. 10, a feed of fodder corn morning and night. The winter feed was hay and corn fodder, with six quarts of grain a day, consisting of bran, cottonseed and corn(cob) meal, equal parts, watered twice a day.

Milk record of Holstein cow, Betty 2nd, dropped her calf August 20, 1891, and in twenty days in September gave 1051 lbs. of milk.

STAEMENT OF WILLIAM A. RUSSELL.

Summer feed, 3 quarts corn and cotton-seed meal, two parts corn and one part cotton-seed. Corn fodder and hay morning and night. Winter feed ensilage and hay once a day, 6 quarts grain, mixed, equal parts corn, and cotton-seed meal, and bran a day; watered twice a day.

Queen Ruiter dropped her last calf Nov. 14th, 1890, is due to calve, Jan. 8, 1892. From Nov. 20, 1890, to Sept. 1, 1891, she has given 12,192½ lbs. of milk, and is now giving 30 lbs. milk per day.

HERDS OF MILCH COWS.

The Committee on Herds of Milch Cows have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$18. First premium, to Leverett Swan, Methuen, for herd of one grade Holstein, and four grade Ayshire cows.

$12. Second premium, to J. D. W. French, No. Andover, for five Ayshire cows.

Diploma and $15 to William A. Russell, No. Andover, for five Holstein-Fresian cows.

Eben'r Webster, Andrew Mansfield, H. L. Burpee, S. B. George—*Committee.*

STATEMENT OF LEVERETT SWAN.

Herd of 5 cows, "Lizzie," age 12 years, grade Ayshire, raised by myself, last year's milk record 4275 quarts.

"Fairmaid," bred and raised by L. Swan, age 7 years, grade Ayshire, milk record for past year 4015 quarts.

"Florence," raised by L. Swan, age 15 years, grade Ayshire and Holstein, milk record for past year 3617 quarts.

"Creeper," grade Ayshire, bred and raised by L. Swan, age 5 years, milk record past year 3107 quarts.

"Julia," grade Ayshire, bred and raised by L. Swan, age 5 years, milk record, past year, 2493 quarts.

This herd runs in pasture and fall feed, with nearly one bushel of brewery grain, and two quarts of gluten and cotton-seed meal per day.

Total amount of milk for the herd for one year, 17,507 quarts.

STATEMENT OF J. D. W. FRENCH.

"Roxanna 8th, 8536 A. R., 6 years old; in milk 273 days, yield 5670 lbs; dropped last calf, Dec. 7, 1890; due to calve Nov. 7.

"Fedalma," No. 8231, A. R., 7 years old; in milk 273 days, yield 4985½ lbs.; dropped last calf Dec. 30, 1890; due to calve Dec. 7.

"Molly Burke," 8546, A. R., 6 years old; in milk 244 days, yield 4709 lbs.; dropped last calf Jan. 30, 1891; due to calve Jan. 10.

"Princess Rose," No. 10,163, A. R., 3 years old; in milk 273 days, yield 4254 lbs.; dropped last calf Aug. 16, 1890; due to calve Jan. 8; yield of milk from Aug. 16, 1890, to Sept. 1, 1891, 7403½ lbs.

"Nellie Day," 6745, A. R., 10 years old; in milk 254 days; yield 3969 lbs.; dropped last calf Aug. 10, 1891, previous calf, May 9, 1890. Yield of milk from May 9th, to July 10, 1891, 9008 lbs.

The record of yield extends from Jan. 1, 1891, to Sept. 1, 1891 (8 months). Some of the cows being dry part of time.—Total yield of milk from Jan. 1, 1891, to Sept. 1, 1891, 23,587½ lbs.

For statement of feed, see milch cows.

STATEMENT OF WILLIAM A. RUSSELL.

I enter for herd of milch cows, Holstein-Fresian cows, "Lady Shepard," No. 1586. "Belle Fairfax," 1117. "Esther Shepard," No. 3008. "Queen Ruiter," No. 4488. "Lady Bess," 1051.

"Lady Shepard" calved Aug. 14. "Belle Fairfax," Aug. 2. "Esther Shepard," Aug. 15. "Lady Bess," July 19. "Queen Ruiter," Nov. 14, 1890.

"Lady Shepard's" milk record for the past three years is 13,168 lbs., 12,274 lbs., and 14,250 lbs., respectively, and from Aug. 18th to Sept. 20, 1891, 1795 lbs.

"Belle Fairfax's" milk record for the past three years is 14,557 lbs., 15,157 lbs. and 14,500 lbs., respectively, and from Aug. 10 to Sept. 20, 1891, is 2320 lbs.

"Esther Shepard's" 4 years old milk record is 12,110½ lbs.; from Aug. 16 to Sept. 20, 1891, is 1702½ lbs.

"Queen Ruiter's" milk record for season of 1889-90 13,235 lbs., and from Nov. 20, 1890, to Sept. 1, 1891, 12,192½ lbs.

"Lady Bess's" milk record for the past 2 years has been 11,952 lbs., and 12,535 lbs.; from Aug. 1st to Sept. 20th, 2100 lbs.

For feed see statement under milch cows.

Respectfully submitted,

WILLIAM A. RUSSELL,
By Jas. C. Poor, Manager.

HEIFERS—PURE BRED.

The Committee on Heifers, Pure Bred, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

$9. First premium, to J. F. Gulliver, Andover, for 3 year old Jersey heifer, "Sadie De Bonair," No. 58,672.

$5. First premium, to J. F. Gulliver, Andover, for Jersey heifer calf, 4 months old.

$9. First premium, to J. D. W. French, No. Andover, for Ayshire heifer in milk, "Princess Rose," No. 10,163, 3 years old.

$6. Second premium, to J. D. W. French, No. Andover, for Ayshire heifer, "Fedelma," No. 10,511, 3 years old.

$5. First premium, to J. D. W. French, No. Andover, for Ayshire heifer, "Azalia," No. 10,968, 2 years old.

$5. First premium, to J. D. W. French, No. Andover, for Ayshire heifer, "Tessa," No. 10,972, 20 months old.

$4. Second premium, J. D. W. French, No. Andover, for Ayshire heirer, "Rose Blossom," No. 10,971, 1 year old.

$5. First premium, to J. D. W. French, No. Andover, for Ayshire heifer calf, 9 months old.

$4. Second premium, to Maurice H. Connor, West Newbury, for Ayshire heifer, "Brunette," 3rd, yearling.

$4. Second premium, to Wm. A. Russell, No. Andover, for Holstein heifer, 2 years old.

$5. First premium, to Wm. A. Russell, No. Andover, for Holstein heifer calf.

$6. Second premium, to Wm. A. Russell, No Andover, for Holstein heifer in milk, 2 years old.

$9. First premium, to Jas. C. Poor, No. Andover, for Holstein heifer in milk, 3 years old.

$5. First premium, to Jas. C. Poor, No. Andover, for Holstein heifer, 2 years old.

$6. Second premium, to E. C. Little, Haverhill, for Jersey heifer, 28 months old.

$5. First premium, to E. C. Little, Haverhill, for Jersey heifer, 14 months old.

$4. Second premium, to E. C. Little, Haverhill, for Jersey heifer, 1 year old.

$4. Second premium, to E. C. Little, Haverhill, for Holstein heifer calf, 4 months old.

$5. First premium, to F. H. Foster, Andover, for Guernsey heifer, 9091, 1 year old.

James Noyes, E. K. Brown, Daniel A. Carlton—*Committee.*

HEIFERS—NATIVE OR GRADE.

The Committee on Heifers, native or grade, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$5. First premium, to George Ripley, Andover, for grade Jersey heifer.

$4. Second premium, to John F. Higgins, Middleton, for native heifer calf.

$9. First premium, to Lewis Albegett, No. Andover, for grade Ayshire heifer, in milk, 3 years old.

$4. Second premium, to James J. Abbott, No. Andover, for grade Jersey heifer, 2 years old.

$4. Second premium, to W. S. Huges, No. Andover, for grade Jersey heifer, 17 months old.

$5. First premium, to D. M. Ayer, Methuen, for grade Holstein heifer, 2 years old.

Chas. S. Emerton, D. L. Haskell, Doane Cogswell, W. H. Hopkinson, Henry A. Hayward—*Committee.*

WORKING OXEN AND STEERS.

The Committee on Working Oxen and Steers have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$12. First premium, to J. P. Little, Amesbury, for pair of Hereford oxen, 5 years old, weight 3950 lbs.

$10. Second premium, to Wm. P. Christopher, Middleton, for pair brindle oxen, 7 years old, weight 2675 lbs.

$8. Third premium, to A. W. Peabody, Middleton, for pair red oxen, 7 years old, weight 3310 lbs.

$10. First premium, to B. H. Farnham, No. Andover, for pair working steers, 4 years old, weight 2840 lbs.

$6. Second premium to James C. Poor, No. Andover, for pair of Holstein working steers.

Eugene L. Wildes, B. F. Eaton, M. H. Poor, Richard S. Bray—*Committee.*

STEERS.

The Committee on Steers have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$8. First premium, to B. W. Farnham, No. Andover, for 3 year old steers.

$6. Second premium, to B. H. Farnham, No. Andover, for 3 year old steers.

$5. Second premium, to Wm. C. Christopher, Middleton, for pair 2 year old steers.

S. Longfellow, R. Jacques, N. W. Moody, G. L. Averill —*Committee.*

STALLIONS FOR DRIVING PURPOSES.

The Committee on Stallions for driving purposes have attended to their duty, and respectfully report to the Secretary that they have made the following awards.

$10. First premium, to William S. Messerve, Haverhill, for bay stallion, "Little Phil."

$6. Second premium, to Charles A. Lunt, West Newbury, for seal brown stallion, " Gladstone."

Diploma and $15. To J. G. McAllister, Lawrence, for stallion of any age or breed, with five of his stock, for stallion, " Essex Hambletonian."

O. S. Butler, S. F. Newman, Geo. B. Blodgett—*Committee.*

BROOD MARES—FARM PURPOSES.

The Committee on Brood Mares for farm purposes have attended to their duty, and respectfully report to the Secretary that they have made the following awards.

$10. First premium, to E. C. Little, Haverhill, for gray mare.

$6. Second premium, to B. H. Farnham, No. Andover, for gray mare.

$4. Third premium, to John H. George, Methuen, for sorrel mare, weight 1250 lbs.

W. F. Kinsman, C. L. Tozier, H. H. Demsy—*Committee.*

BROOD MARES—DRIVING PURPOSES.

The Committee on Brood Mares for Driving purposes have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$10. First premium, to Peter Holt, jr., No. Andover, for Hambletonian mare, "Fanny."

$6. Second premium, to J. G. McAllister, Lawrence, for brood mare, "Linda."

$4. Third premium, to Towne Brothers, Bradford, for brood mare.

Albert Kimball, O. S. Butler, S. F. Newman—*Committee.*

FAMILY HORSES.

The Committee on Family Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$10. First premium, to M. C. Andrews, Andover, for brown mare, "Princess."

$6. Second premium, to Maurice H. Connor, West Newbury, for mare, "Nellie."

$4. Third premium, to William K. Cole, Boxford, for bay mare.

David Pingree, L. E. Nickerson, Story D. Pool, Wm. P. Bailey—*Committee.*

GENTS' DRIVING HORSES.

The Committee on Gentlemen's Driving horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$10. First premium, to Byron G. Kimball, Bradford, for gray mare, "Starlight."

$6. Second premium, to Charles C. Clarke, Lawrence, for Hambletonian mare, "Milly."

$4. Third premium, to M. C. Andrews, Andover, for Knox mare, "Cyclone."

J. Otis Winkley, David Warren, Joseph Shattuck—*Committee.*

SINGLE FARM HORSES.

The Committee on Single Farm Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$10. First premium, to John H. Perkins, Lynnfield, for bay mare, "Maude," weight 1200 lbs.

$6. Second premium, to Moses H. Poor, West Newbury, for draft horse, weight 1210 lbs.

$4. Third premium, to James C. Poor, No. Andover, for draft horse, weight 1210 lbs.

$10. First premium, to Fred Symonds, No. Andover, for black horse, weight 1000 lbs.

$6. Second premium, to W. J. Currier, Danvers, for draft horse, weight 1050 lbs.

Nathan F. Abbott, Wm. R. Roundy, E. P. Barrett—*Committee.*

PAIRS OF FARM HORSES WEIGHING LESS THAN 2500 LBS.

The Committee on Pairs of Farm Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$10. First premium to Maurice H. Connor, West Newbury, for horses weighing 2250 lbs.

$8. Second premium to J. Horace Nason, Boxford, for horses weighing 2400 lbs.

Albert Berry, Charles Haseltine—*for the Committee.*

COLTS FOR FARM PURPOSES—THREE AND FOUR YEARS OLD.

The Committee on Colts for Farm purposes three and four years old have attended to their duty, and respectfully report to the Secretary that they have made the following award:

$8. First premium, to Maurice H. Connor, West Newbury, for bay mare colt, 4 years old.

James E. Page, H. M. Goodrich—*for the Committee.*

COLTS FOR FARM PURPOSES, ONE AND TWO YEARS OLD.

The Committee on Colts for Farm purposes, one and two years old have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$8. First premium, to Michael Dwyer, Methuen, for 2 year old filley.

$5. Second premium, to Maurice H. Connor, West Newbury, for 2 year old colt, "Major," weight 960 lbs.

$5. First premium, to R. T. Jaques, Newbury, for yearling colt.

$3. Second premium, to Harley E. Meade, No. Andover, for yearling colt.

William S. Phillips, jr., Henry Hobbs, Aaron Sawyer—*Committee.*

COLTS FOR DRIVING PURPOSES, THREE AND FOUR YEARS OLD.

The Committee on Colts for Driving purposes, three and four years old, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$8. First premium, to Edwin Bates, Lynn, for chestnut mare colt, 4 years old.

$5. Second premium to L. F. Moulton, for 4 year old colt.

$6. First premium, to Byron G. Kimball, Bradford, for bay colt, "Thornless," 3 years old.

$3. Second premium, to C. Moynihan, Newbury, for brown colt, 3 years old.

T. P. Harriman, C. Harrington, D. Bradstreet—*Committee.*

COLTS FOR DRIVING PURPOSES, ONE AND TWO YEARS OLD.

The Committee on Colts for Driving purposes one and two years old have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$8. First premium, to J. G. McAllister, Lawrence, for 2 year old colt.

$5. Second premium, to W. H. & L. J. Tufts, Middleton, for Black Stallion Colt, 2 years old, S. X.

$5. First premium, to J. E. Bicknel, jr., Lawrence, for chestnut colt 1 year old.

$3. Second premium, to J. G. McAllister, Lawrence, for yearling colt, "Lawrence Cyclone."

$3. Third premium, to Benj. Pearson, jr., Newbury, for sorrel stallion colt 2 years old.

S. H. Bailey, F. A. Russell, Charles A. Mason—*Committee.*

SWINE—LARGE BREEDS.

The Committee on Swine, large breeds, have attended to their duty, and respectfully report to the Secretary that they have made the following awards.

$8. First premium, to J. G. McAllister, Lawrence, for Chester white boar.

$8. First premium, to J. G. McAllister, Lawrence, for Chester white sow.

$8. First premium, to Alfred G. Playdon, Andover, for Chester white sow and pigs.

$8. First premium, to Geo. E. Littlefield, Salisbury, for English Berkshire boar.

$5. Second premium, to Geo. E. Littlefield, Salisbury, for litter of 7 weaned pigs.

$8. First premium, to Geo. E. Littlefield, Salisbury, for English Berkshire sow.

$5. Second premium, to Geo. E. Littlefield Salisbury for Chester white sow.

$8. First premium, to James C. Poor, No. Andover, for litter weaned pigs.

$8. First premium, to M. B. Chesley, Amesbury, for Chester white boar.

$5. Second premium, to E. C. Little, Haverhill, for Chester white sow.

$5. Second premium, to E. C. Little, Haverhill, for Chester white boar.

John S. Crosby, George A. Dow, John Barker, A. A. Rutherford—*Committee.*

SWINE—SMALL BREEDS.

The Committee on Swine, small breeds, have attended to their duty, and respectfully report to the Secretary that they have made the following awards.

$8. First premium, to J. D. W. French, No. Andover, for small Yorkshire boar, Reg. No. 739.

J. M. Pearl, N. S. Harris, John A. Ellis—*Committee.*

SHEEP.

The Committee on Sheep have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$10. First premium, to J. D. W. French, No. Andover, for twelve grade black faced ewes.

$8. First premium to J. D. W. French, No. Andover, for Oxfordshire buck.

$6. First premium, to C. H. Tenney, Methuen, for 10 Oxford-down lambs, 5 months old.

Jos. H. Blunt, Frank Marsh, Virgil Dow—*Committee.*

POULTRY.

The Committee on Poultry have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$2 and diploma. To Frank E. Dresser, Lawrence, for breeding pen and pair Partridge Cochin chicks.

$2. First premium, to Joseph Pearson, Newbury, for pair white Plymouth Rock chicks.

$2. First premium, to Lewis W. Hawkes, Saugus, for Toulouse geese.

$2. First premium, to Lewis W. Hawkes, Saugus, for Toulouse goslings.

$2. First premium, to Lewis W. Hawkes, Saugus, for Embden geese.

$2. First premium, to Lewis W. Hawkes, Saugus, for Creeper fowls.

$1. Second premium, to Lewis W. Hawkes, Saugus, for Creeper chicks.

$1. Second premium, to Lewis W. Hawkes, Saugus, for Toulouse goslings.

$1. Second premium, to Joseph Pearson, Newbury, for White Plymouth Rock fowls.

$2. First premium, to M. B. Bailey, Topsfield, for Indian game fowls.

$1. Second premium, to W. S. Hughs, No. Andover, for pair Plymouth Rock chicks.

$2. First premium, to A. L. Griffin, Lawrence, for Black Minorcas.

$2. First premium, to A. L. Griffin, Lawrence, for Barred Plymouth Rocks.

$2. First premium, to A. L. Griffin, Lawrence, for Mottled Minorca chicks.

$2. First premium, to R. B. Smith, No. Andover, for Pekin ducks.

$1. Second premium, to R. B. Smith, No. Andover, for White Leghorn chicks.

$2. First premium, to R. B. Smith, No. Andover, for pen White Leghorns.

$1. Second premium, to R. B. Smith, No. Andover, for White Leghorns.

$2. First premium, to G. P. Wilkins, Middleton, for pair Bronze turkeys.

$2. First premium, to Geo. B. Parkhurst, Boxford, for Light Brahma chicks.

$1. Second premium, to Geo. B. Parkhurst, Boxford, for pair White Wyandottes.

$2. First premium, to Joseph Pearson, Newbury, for Plymouth Rocks.

$1. Gratuity, to R. B. Smith, No. Andover, for Game chicks.

$1. Gratuity, to Moses B. Abbott, Andover, for White Plymouth Rock chicks, 16 weeks old.

M. A. Plummer, Lewis P. Hawkes, W. Burke Little—*Committee.*

PLOUGHING WITH DOUBLE TEAMS.

The Committee on Ploughing with Double teams have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$10. First premium, to J. P. Little, Amesbury, 4 oxen, Landside plough.

$8. Second premium, to B. H. Farnham, No. Andover, 2 oxen and horse, Landside plough.

David M. Cole, Richard Bray, Abel Stickney—*Committee.*

PLOUGHING SINGLE OX TEAMS.

The Committee on Ploughing, Single Ox Teams have attended to their duty, and respectfully report to the Secretary that they have made the following award:

$10. First premium, to Wm. P. Christopher, Middleton, Landside plough.

As there was but one entry, your committee made examination of the lands ploughed and the work done by other teams, and were convinced that Mr. Christopher had the most uneven land of all the lots ploughed, and that he did as good work in every particular as was done by any other team, therefore they award him the first premium.

Amos Haseltine, W. C. Allyn, Wm. H. Greenleaf—*Committee.*

PLOUGHING SWIVEL PLOUGH, DOUBLE OX TEAMS.

The Committee on Ploughing with Swivel Plough Double Ox Teams have attended to their duty, and respectfully report to the Secretary that they have made the following award:

$10 First premium, to Farnham and Wilkins, Topsfield, with 4 oxen.

Joseph S. Howe, Joshua H. Chandler, C. D. Ordway—*Committee.*

PLOUGHING WITH HORSES, SWIVEL PLOUGH.

The Committee on Ploughing with Horses, Swivel Plough, have attended to their duty and respectfully report to the Secretary that they have made the following awards:

$10. First premium, to A. M. Robinson, No. Andover, 2 horses, 76, A. plough.

$8 Second premium, to I. C. Brown, Methuen, 2 horses, Yankee swivel plough.

John H. George, Albert Berry, C. M. Sawyer—*Committee.*

PLOUGHING WITH SINGLE OX TEAMS, SWIVEL PLOUGH.

The Committee on Ploughing with Single Ox Teams, Swivel Plough, have attended to their duty, and respectfully report to the Secretary that they have made the following award:

$10. First premium, to A. W. Peabody, Middleton, for Hubbell plough.

James J. H. Gregory—*for the Committee.*

PLOUGHING WITH THREE HORSES.

The Committee on Ploughing with Three Horses have attended to their duty, and respectfully report to the Secretary that they have made the following award:

$10. First premium, to Maurice H. Connor, West Newbury, Oliver chilled plough.

S. F. Newman, David Warren, Carlton Little—*Committee.*

PLOUGHING WITH SULKY PLOUGH.

The Committee on Ploughing with Sulky Plough have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$10. First premium, to Fred A. Russell, Methuen, Syracuse sulky.

$8. Second premium, to Geo. E. Kline, Lawrence, Syracuse sulky.

Aaron Low, A. P. Fuller, A. B. Fellows, M. C. Andrews, George B. Austin—*Committee.*

HARROWS.

The Committee on Harrows have attended to their duty

and respectfully report to the Secretary that they have made the following awards:

$10. First premium to F. A. Russell, Methuen, for "Climax" Harrow.

$8. Second premium, to Henry Newhall & Co., Danvers, for Spring Tooth Harrow.

Sherman Nelson—*for the Committee.*

AGRICULTURAL IMPLEMENTS.

The Committee on Agricultural Implements have attended to their duty, and respectfully report to the Secretary that they have made the following awards.

$10. First premium to Henry Newhall & Co., Danvers, for collection of implements.

$7. Second premium, to M. E. Austin, Lawrence, for collection of implements.

$5. First premium, to S. J. Pedlar, Methuen, for a two horse cart.

$5. First premium, to George E. Daniels, Rowley, for a one horse cart.

$3. First premium, to George E. Daniels, Rowley, for a two horse farm wagon.

$3. Gratuity, to S. D. Hinxman, No. Andover, for a two horse farm cart.

$5. Gratuity, to George E. Daniels, Rowley, for market wagon.

$2. Gratuity, to H. H. Spofford, Groveland, for a two horse wagon.

$3. Gratuity, to H. H. Spofford, Groveland, for a one horse cart.

$2. Gratuity, to H. G. Sears, Danvers, for a one or two horse farm wagon.

$1. Gratuity, to J. D. Dodge, Rowley, for a set of marsh shoes.

$2. Gratuity, to S. J. Pedlar, Methuen, for 1 set 1 wheel and axle.

$5. Gratuity, to the Lawrence Hardware Co., for creamery.

$5. Gratuity, to F. M. Victor, Lawrence, for collection.

Geo. E. Johnson, Daniel Brickitt, B. F. Stanley—*Committee.*

CARRIAGES.

The committee on Carriages have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$5. Gratuity, to F. A. Snow & Son, Lawrence, for one two-seated Democrat wagon.

$5. Gratuity, to J. W. Joyce & Co., Lawrence, for one furniture wagon.

$2. Gratuity, to T. P. Harriman, Andover, for one light market wagon.

Henry Hobbs, James Wilson, Aaron Sawyer—*Committee.*

IN EXHIBITION HALL.

REPORT OF SUPERINTENDENT.

The Exhibition of the Society, in the City Hall at Lawrence, September, 1891, was a decided success, although the entries in some departments were much smaller than usual. Only one-third as many entries were made in the fancy work department as were made the previous year, and in the rug and counterpane departments about one-half as many. But as we stated in our report of last year, the merit of an exhibition does not consist in the large number of articles exhibited, so much as in the quality. In this respect the exhibition in the above named departments was fully equal to any former year, and was a decided improvement in the fact that most of the articles entered were so far meritorious as to fully justify their being entered. It was quite a relief to the committee to find so few entries which they would desire to exclude. We would advise that no one person in bringing fancy work should enter too large a number of articles, but make a selection of such articles as are most worthy of notice.

In the department of fancy work it is necessary to protect the articles entered by placing them either in the wire covered cases which the society now owns or in glass cases. The cases owned by the society, are not sufficient, and it is necessary to borrow each year. This is difficult as those who own cases usually have them in use. Six cases in addition to those now owned by the society are needed. Would it not be advisable to authorize the secretary either to have that number made or to purchase

as he may have opportunity at a low price, such as would be suitable. Many articles entered in the art department need to be placed in cases.

More than the usual interest was taken in the bread and dairy room by reason of a special premium offered by Mr. Whitney of Lawrence, of $15 for the best loaf of bread, $10 for the best pound of butter, and $5 for the heaviest dozen of eggs. The offer was an exceedingly generous one, and was the occasion of especial interest in that department of the exhibition.

A good show of apples was made, quite as good as usual perhaps, and yet the liberal premiums and gratuities offered by the society ought to be an inducement for growers of fruit to make a more careful selection and for those who have choice specimens of any one kind to enter them. More than three hundred square feet of table room was covered with plates of apples. Probably two-thirds of this space would have held all that could be called of especially superior quality. Many fine specimens were shown of most of the kinds for which gratuities and premiums are offered. There are many exhibitors who never fail to enter choice fruit and who will enter none that is not worthy of notice. But there are many entries made which do not add to the attractiveness of the exhibition.

On the pear tables, notwithstanding the great quantity of pears grown this season, the quantity entered was not large. Many fine samples were shown of most of the kinds in general favour.

An excellent show of peaches was made, and a fair exhibit of grapes.

The usual difficulty of marking fruit so that each plate shall have and retain the name of the owner, still exists. Cards will get misplaced until some way is devised by which they can be securely attached to the plate. It is extremely annoying to one who enters a fine plate of fruit to find his card exchanged. These changes are usually

made by careless visitors, who in taking up a card put it on the wrong plate, but the annoyance is as great to the owner, who only knows that the change has been made, and cannot know how it was done.

The vegetable department was in the basement of the City Hall, and an excellent show was made. Mr. Bradley and his assistant, who had the arrangement of this department, gave especial attention to the same and arranged each kind of vegetables in groups, making the awarding of prizes and gratuities much easier for the committee, and more attractive to visitors. The baskets purchased for use in this department were of great convenience as each could be marked with a tag which would remain.

A good variety of plants and flowers was entered for premium, among which were many fine specimens which added much to the attractiveness of the exhibition. Thornton Brothers of Lawrence occupied the platform with a great variety of beautiful plants and flowers arranged in fine taste, forming an especially interesting feature but these were not entered for premium.

Many articles of manufacture in small wares of various kinds were entered worthy of especial notice. This portion of the exhibition should be largely increased. An exhibit of files, horse shoes, tools, etc. in this department represent a class of manufactures which it is especially desirable to encourage.

The exhibit of lamps and various articles in bronze entered by Craighead & Kintz Co., of paper and envelopes exhibited in connection with and including the wood from which they were made in its various processes of reduction to pulp, by the Russell Paper Manufacturing Co., of braids made by the Wright Manufacturing Co., of Lawrence, were especially noticeable features worthy of especial mention.

But that part of the exhibition which first attracted the attention of visitors on entering the hall, and which gave especial character to the general exhibit and made the ex-

hibition as a whole, the most attractive which has been made by the society, was that of the Pacific, Everett, Arlington, Atlantic and Pemberton Mills. The great variety and excellent styles of dress goods made by a portion of these mills, furnishes an opportunity by a skillful arrangement of the same, of making an exceedingly beautiful show, and also of furnishing to visitors, an object lesson of especial interest, in showing the great advance which has been made in the manufacture of dress fabrics in this flourishing city of less than half the age of this society. The managers of these mills deserve the thanks of this society for their efforts which contributed so largely to the success of this exhibition. An exhibition of hosiery with a machine for knitting the same, by the Lawrence Hosiery Co ., attracted much attention. The goods shown were of excellent quality.

By the kindness of the Mayor of Lawrence and of those associated with him the common council room was placed at the disposal of the committee for the art exhibit, furnishing ample room to arrange this department of the exhibition.

The exhibit of oil paintings was quite good and an unusually large entry was made of hand painted ware of decidedly meritorious work.

A new feature for this society was the grange exhibit in the vestry of the Baptist church, which formed a part of the general exhibit of the society. The room of the vestry was divided into five sections which were occupied by the Andover, North Andover, Methuen, Haverhill and Boxford granges. Each grange occupied the space assigned to it and arranged the same in accordance with the taste and judgment of its members. Fruit, vegetables, counterpanes, rugs and fancy work were found in each grange, making of this department an interesting and attractive exhibition.

It is probably true that some portion of the hall exhibit might have been more fully represented had it not

been for the grange department, yet the exhibition as a whole was undoubtedly more successful, and the interest taken by the members of the several granges also contributed largely to the general interest. If the exhibition is held in Lawrence another year, the departments which have been referred to as deficient will probably be fully represented, especially that of fancy work, as it is known that this class of goods will be protected from injury.

The several granges having made a successful exhibit in connection with the society, the individual members will become interested in its work. The work of the society has gradually advanced and extended; and with such variety of manufacturing and mechanical interests as exist in the County, the interest in fancy work and works of art, the cultivation of plants and flowers combined with the products of the farm and orchard, all finding an opportunity for exhibition in the annual gathering of this society, cannot fail of making it an occasion of general interest.

The assistant superintendent with the ladies and gentlemen appointed to assist in arranging the articles in the hall, nearly all responded promptly for duty and rendered efficient service.

Respectfully submitted,

AMOS MERRILL, *Superintendent of Hall.*

DAIRY.

The Committee on Dairy have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$8. First premium, to Mrs. C. N. Gowen, West Newbury, for 5 lbs. butter.

$6. Second premium, to Mrs. W. K. Cole, Boxford, for 5 lbs. butter.

$4. Third premium, to Glen Creamery, Rowley, for butter.

John K. Bancroft, Mrs. B. H. Farnham—*Committee.*

BREAD AND CANNED FRUIT.

The Committee on Bread and Canned Fruit have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$3. First premium, to Mrs. A. L. Wales, Groveland, for wheat bread.

$2. Second premium, to Mrs. J. A. Davis, Amesbury, for wheat bread.

$1. Third premium, to Miss S. Alice George, Groveland, for wheat bread.

$1. Gratuity, to Mrs. C. W. Gowing, West Newbury, for wheat bread.

$1. Gratuity, to Mrs. H. M. Barker, No. Andover, for wheat bread.

$2. First premium, to Mrs. E. Hazeltine, Haverhill, for graham bread.

$1. Second premium, to Annie Horsch, Rowley, for graham bread.

$1. Second premium, to Louisa Bailey, Andover, for brown bread.

$3. First premium, to L. H. Bassett, No. Andover, for canned fruit.

$2. Second premium, to Mrs. Lizzie Wilson, Beverly, for canned fruit and jellies.

50c. Gratuity, to Mrs. Joseph Poor, Andover, for pickles.

Mrs. N. E. Ladd, Mrs. J. Henry Hill, Mrs. J. Warren Moor—*Committee.*

STATEMENT OF MRS. A. L. WALES, FIRST PREMIUM, WHEAT BREAD.

One quart of flour, one half pint each of milk and water, one fourth of compressed yeast cake, dissolved in one half cup warm water, one small tablespoonful each of salt and sugar, one teaspoonful of shortening, melted in the pint of warm water, mix and knead well at night, rise until morning, shape for tin, rise again until about twice its size, bake 45 minutes.

STATEMENT OF MRS. J. A. DAVIS, SECOND PREMIUM, WHEAT BREAD.

Flour used "Bridal Veil," one quart of flour, one tablespoonful of sugar, one teaspoonful of salt, one-quarter of compressed yeast cake. Mix flour, sugar and salt, dissolve yeast in a little warm water, and stir it into the flour, stir into the mixture enough luke warm water to handle neatly with the hands, and knead fifteen minutes, return it to the bowl and rise four hours, then knead ten minutes and form it in a loaf, rise again until double the original size and bake forty minutes with a steady heat.

STATEMENT OF MISS S. ALICE GEORGE, GROVELAND, THIRD PREMIUM, WHEAT BREAD.

Three pints Haxall flour, one pint milk, half cake compressed yeast, one tablespoonful of sugar, a heaping teaspoonful of salt, knead ten minutes, then rise it seven hours, put it in the pan with as little kneading as possible, and rise an hour and one half, then bake forty minutes.

STATEMENT OF MRS. EDWIN M. HASELTINE FOR FIRST PREMIUM, GRAHAM BREAD.

Three cups graham flour, three cups Haxall flour, one teaspoonful of salt, two tablespoonfuls of molasses, one cup of milk, one cup of water and one fourth of a cup of yeast made into a sponge. Mix and let rise over night, in the morning knead well and let it rise again, then knead, put into tins and let rise three fourths of an hour, bake three fourths of an hour.

STATEMENT OF ANNIE C. HORSCH, ROWLEY, FOR SECOND PREMIUM, GRAHAM BREAD.

At night take one quart of cool milk which has been scalded, one half cup sugar, two thirds cup of yeast, one tablespoonful salt, enough Glen Mills improved graham flour to stir stiff with a spoon. In the morning cut it

down with a knife, knead it into shape, let it rise until light, then put it into tins, when at the top bake until done.

STATEMENT OF LOUISA BAILEY, ANDOVER, FOR SECOND PREMIUM, BROWN BREAD.

Three cups of Haxall flour, three cups of Indian meal, one cup of molasses, two teaspoonfuls of salaratus, one pint sour milk and a little salt. Steam three and one half hours.

STATEMENT OF L. H. BASSETT, NO. ANDOVER, FOR FIRST PREMIUM CANNED FRUIT.

The goods exhibited by me are what is called cold packed goods, all the fruit is prepared and then packed in the jars, the jars are then filled with syrup full, the cover and rubber ring are put on and half sealed, then they are put into cold water and slowly boil the water the proper length of time, they are then taken out and sealed at once.

STATEMENT OF MRS. LIZZIE J. WILSON, BEVERLY, SECOND PREMIUM, FOR CANNED FRUIT AND JELLIES.

Having secured the first and most important contribution to the manufacture of preserves, the fruit, the next consideration is the preparation of the syrup in which the fruit is to be suspended, and this requires much care ; the principle thing to be acquainted with is the fact that in proportion as the syrup is longer boiled, its water will become evaporated and its consistency will be thicker. (The best sugar is the most economical for preserves) The syrup, a solution of sugar prepared by dissolving two parts of sugar to one of boiling water ; boil ten minutes, when it begins to swell and boil up throw in a little cold water, do this three or four times, then strain, this is a syrup which neither ferments or crystalizes.

For Jellies—the fruit should first be washed, then cov-

ered with cold water and boiled until tender. Strain the juice through a flannel bag and to every pint of juice add one pound of sugar; the jell should be boiled twenty minutes after the sugar is added. Current jelly requires but eight minutes boiling.

SPECIAL PREMIUM OFFERED BY MR. H. M. WHITNEY OF LAWRENCE, FOR BREAD, BUTTER AND EGGS.

$15. First premium, to Mrs. M. S. Wright of Lawrence, for best loaf of bread.

$10. First premium, to Mrs. C. W. Gowen of West Newbury, for pound of best butter.

$5. First premium, to Henry Phillips, Bradford, for one dozen fresh hen's eggs, greatest weight, 41 ounces, 347½ grains.

Gilbert E. Hood, Mrs. Fred S. C. Herrick, Mrs. George L. Averill—*Committee.*

HONEY.

The Committee on Honey have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$3. First premium, to John Barker, No. Andover.

$2. Second premium, to F. W. Poor, Haverhill.

E. A. Emerson, H. N. Harriman, Warren M. Cole—*Committee.*

STATEMENT OF JOHN BARKER.

The honey that I enter for premium was taken from hives in July, 1891. I shall have 150 lbs. surplus honey this season. I had twenty swarms in the fall of 1890 of which fifteen swarms wintered, sold one swarm, and have twenty swarms now, mostly in frame hives; kind, common or black bees.

PEARS.

The Committee on Pears have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$3. First premium, to H. G. Herrick, Lawrence, for Anjou pears.

$3. First premium, to Allen Burr, Lawrence, for Bosc pears.

$3. First premium, to A. C. Osborn, Peabody, for Belle Lucrative pears.

$3. First premium, to Z. J. Chase, Lynn, for Sheldon pears.

$3. First premium, to Edwin Bates, Lynn, for Louis Bonne pears.

$3. First premium, to Edwin Bates, Lynn, for Vicar pears.

$3. First premium, to Edwin Bates, Lynn, for Howell pears.

$3. First premium, to Edwin Bates, Lynn, for Lawrence pears.

$3. First premium, to B. F. Stanley, Newburyport, for Bartlett pears.

$3. First premium to J. Henry Hill, Amesbury, for Onandaga pears.

$3. First premium, to G. W. Marsden, Lawrence, for Clairgeau pears.

$3. First premium to Walter B. Allen, Lynn, for Urbaniste pears.

$3. First premium, to E. F. Webster, Haverhill, for Seckle pears.

$6. First premium, to Edwin Bates, Lynn, for collection of pears.

$1.50. Gratuity, to A. W. Stearns, Lawrence, for Anjou pears.

$1.50. Gratuity, to J. W. Shirley, Methuen, for Seckle pears.

$1.50. Gratuity, to Wm. Burke Little, Newbury, for Bosc pears.

$1.50. Gratuity, to James Wilson, Topsfield, for Onandaga pears.

$1.50. Gratuity, to Wm. Burke Little, Newbury, for Bartlett pears.

$1.50. Gratuity, to Edwin Bates, Lynn, for Bosc pears.

$1.50. Gratuity, to Mrs. G. McIntire, Lawrence, for Seckle pears.

$3.00. Gratuity, to J. Henry Hill, Amesbury, for collection of pears.

$2.00. Gratuity, to A. C. Lear, Danvers, for collection of pears.

P. M. Neal—*for the Committee.*

APPLES.

The Committee on Apples have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$1.50. First premium, to Rose Buxton, Peabody, for Crab apples.

$3. First premium, to C. C. Blunt, Andover, for Hulburt.

$3. First premium, to M. Shea, Lawrence, for Gravenstein.

$3. First premium, to G. F. Sanger, Peabody, for Drap D'Or.

$3. First premium, to John Shehon, Lynn, for Baldwin.

$3. First premium, to S. F. Newman, Newbury, for Tolman Sweet.

$3. First premium, to D. H. Ilsley, Newbury, for Roxbury Russet.

$3. First premium, to Joseph Ilsley, Newbury, for Hunt's Russet.

$3. First premium, to Daniel C. Lunt, Newbury, for R. I. Greening.

$3. First premium, to David Warren, Swampscott, for Pickman Pippin.

$3. First premium, to E. F. Childs, Lawrence, for Porter.

$3. First premium, to B. F. Huntington, Amesbury, for Sweet Baldwin.
$3. First premium, to Geo. D. Walton, Peabody, for King of Tompkins.
$3. First premium, to T. C. Thurlow, West Newbury, for Danvers Sweet.
$3. First premium, to J. Henry Hill, Amesbury, for Granite Beauty.
$3. First premium, to J. Henry Hill, Amesbury, for Bailey Sweet.
$6. First premium, to J. Henry Hill, Amesbury, for best collection of apples.
$3. First premium, to J. Henry Hill, Amesbury, for Smith's Cider.
$3. First premium, to J. A. Montgomery, No. Andover, for Hubbardston.
$1. Gratuity, to Horace Carlton, Methuen, for Sweet Russet.
$1. Gratuity, to C. H. Bell, Andover, for President's Greening.
$1. Gratuity, to D. N. Cole, Boxford, for Gravensteins.
$1. Gratuity, to Patrick Lawson, Lawrence, for Riverside.
$1. Gratuity, to M. Shea, Lawrence, for Maiden Blush.
$1. Gratuity, to S. J. Chase, Lynn, for English Sweet.
$1. Gratuity, to Wm. Burke Little, Newbury, for Smith's Cider.
$1. Gratuity, to S. B. George, Groveland, for Groveland.
$1. Gratuity, to S. B. George, Groveland, for Danvers Sweet.
$1. Gratuity, to Abel H. Stickney, Groveland, for R. I. Greening
$1. Gratuity, to Abel H. Stickney, Groveland, for Hunt's Russet.
$1. Gratuity, to P. M. Ilsley, Newbury, for Roxbury Russet.
$1. Gratuity, to S. G. Bailey, Andover, for Hubbardston.
$1. Gratuity, to E. F. Childs, Lawrence, for Baldwin.
50c. Gratuity, to M. E. Ladd, Groveland, for Crab apple.

$1. Gratuity, to Eben'r Webster, Haverhill, for 20 Ounce.
$1. Gratuity, to T. C. Thurlow, West Newbury, for Porter.
$1. Gratuity, to J. Henry Hill, Amesbury, for King of Tompkins.

John W. Allen, Walter B. Allen, S. B. Fall, B. F. Huntington—*Committee.*

PEACHES, GRAPES AND ASSORTED FRUIT.

The Committee on Peaches, Grapes and Assorted Fruit have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$2.00. First premium, to E. H. Foster, Haverhill, for best plate of peaches.
2.00. First premium, to B. F. Stanley, Newburyport, for Seedling peaches.
2.00. First premium, to John Barker, No. Andover, for old Mixon peaches.
1.50. Gratuity, to W. H. Hayes, No. Andover, for four plates of peaches.
1.00. Gratuity, to Carrie E. Walton, Salem, for White Flesh Freestone peaches.
50c. Gratuity, to Joseph Kline, Lawrence, for peaches.
50c. Gratuity, to Cochickewick Farm, No. Andover, for Yellow Flesh peach.
50c. Gratuity, to Thomas S. Holmes, Lawrence, for late Crawford peaches.
50c. Gratuity, to W. S. Huges, No. Andover, for Seedling peaches.
50c. Gratuity, to J. W. Goodell, Lynn, for Old Mixon peaches.
50c. Gratuity, to Edwin Bates, Lynn, for Yellow Flesh peaches.
50c. Gratuity, to W. K. Cole, Boxford, for Seedling peaches.
50c. Gratuity, to H. A. Southwick, Peabody, for Seedling peaches.

50c. Gratuity, to B. H. Farnham, No. Andover, for Yellow Flesh peaches.

1.50. Gratuity, to J. Henry Hill, Amesbury, for three plates of peaches.

3.00. First premium, to Mrs. S. J. Barr, Lawrence, for Martha grapes.

3.00. First premium, to John J. Ragan, Lawrence, for Concord grapes.

3.00. First premium, to Warren P. Hutchinson, Danvers, for Brighton grapes.

3.00. First premium, to Warren P. Hutchinson, Danvers, for Niagara grapes.

3.00. First premium, to Warren P. Hutchinson, Danvers, for Moore's early grapes.

3.00. First premium, to Warren P. Hutchinson, Danvers, for Worden grapes

3.00. First premium, to Warren P. Hutchinson, Danvers, for Hartford Prolific grapes.

2.00. Gratuity to A. W. Stearns, Lawrence, for cold house grapes.

1.50. Gratuity, to C. H. Hall, Methuen, for Orange quinces.

1.00. Gratuity, to Edwin Bates, Lynn, for Orange quinces.

50c. Gratuity, to G. S. Armstrong, Lawrence, for Orange quinces.

50c. Gratuity, to Cochickewick farm, No. Andover, for Champion quinces.

1.00. Gratuity, to Eben S. Flint, Danvers, for blackberries.

3.00. Second premium, to Edwin Bates, Lynn, for basket assorted fruit.

50c. Gratuity, to J. W. Goodell, Lynn, for Imperial Gage plums.

50c. Gratuity, to John Homer, Peabody, for Weaver plums.

50c. Gratuity, to W. G. McIntire, Lawrence, for Ponds Seedling plums.

50c. Gratuity, to Mrs. N E. Ladd, Groveland, for Lombard plums.

50c. Gratuity, to J. Henry Hill, Amesbury, for Lombard plums.

50c. Gratuity, to J. Henry Hill, Amesbury, for Moore's Arctic plums.

1.00. Gratuity, to C. H. & C. W. Mann, Methuen, for four varieties of strawberry plants.

We would mention the plate of Japan Persimmons raised by Mr. John S. Page of Apopka, Florida, formerly of Danvers, but having been grown without the County we could not make any award.

Andrew Nichols, T. C. Thurlow, J. Henry Hill, J. W. Goodell—*Committee.*

PLANTS AND FLOWERS.

The Committee on Plants and Flowers have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

$5.00. Second premium, to Edward Flynn, Lawrence, for collection Foliage plants.

1.00. First premium, to Mrs. A. L. Cain, Lynn, for 12 Salpiglossis in variety.

1.00. First premium, to Mrs. Geo. L. Burnham, No. Andover, for collection of Sweet Peas.

50c. Gratuity, to H. M. Moody, Andover, for Fig Tree.

50c. Gratuity, to E. E. Dorman, Methuen, for Calla.

50c. Gratuity, to G. L. Sheldon, Lawrence, for Cape Jessamine.

2.00. First premium, to T. C. Thurlow, West Newbury, for collection of Phlox.

1.00. First premium, to Mrs. R. Buxton, Peabody, for Garden annuals, twelve varieties.

1.00. First premium, to Mrs. J. R. Bailey, Lawrence, for twelve Asters.

1.00. First premium, to E. & C. Woodman, Danvers, for Carnation Pinks, six varieties.

50c. Gratuity, to Edward Flynn, Lawrence, for Roses.

50c. Gratuity, to M. Wingate & Son, Lawrence, for Roses.
2.00. First premium, to Mrs. E. Haseltine, Haverhill, for collection of Pansies, fifty specimens.
50c. Gratuity, to Lawrence Davenport, Lawrence, for twelve Dahlias, six varieties.
1.00. First premium, to Mrs. R. Buxton, Peabody, for twelve double Petunias, six varieties.
1.00. Gratuity, to T. C. Thurlow, West Newbury, for twelve Gladiolas.
50c. Gratuity, to G. A. Smith, Lawrence, for Gladiolas.
1.00. First premium, to Mrs. J. A. Cain, Lynn, for twelve double Geraniums.
1.00. First premium, to Mrs. J. A. Cain, Lynn, for twelve single Geraniums.
1.00. First premium, to Mrs. Oscar Young, No. Andover, for twelve Nasturtiums, six varieties.
2.00. First premium, to Mrs. E. Haseltine, Haverhill, for twenty-four Pansies in varieties.
1.00. First premium, to Mrs. Oscar Young, No. Andover, for twenty-four Double Zinnias.
1.00. First premium, to Mrs. A. L. Cain, Lynn, for twenty-four African Marigolds in variety.
1.00. First premium, to Mrs. A. L. Cain, Lynn, for twenty-four Dwarf French Marigolds.
1.00. First premium, to Mrs. R. Buxton, Peabody, for twenty-four single Petunias in variety.
1.00. First premium, to Mrs. A. F. Clark, Methuen, for display of Coxcombs.
1.00. First premium, to Mrs. R. Buxton, Peabody, for twelve Scabiosas in variety.
5.00. First premium, to Mrs. J. A. Cain, Lynn, for collection of cut flowers, one hundred varieties.
3.00. Second premium, to Mrs. R. Buxton, Peabody, for collection of cut flowers.
2.00. First premium, to B. F. Bickum, Haverhill, for pair of Bouquets for vases.
1.00. Second premium, to Mrs. David Warren, Swampscott, for pair Bouquets for vases.

50c. Gratuity, to Mrs. R. Campbell, Lawrence, for Bouquet for vases.

1.00. Gratuity, to Mrs. G. H. Tufts, Middleton, for basket native flowers.

The committee wish to mention a fine display of flowers on the stage in the hall by Thornton Brothers of Lawrence, including elegant designs, baskets, and specimen plants.

Edwin V. Gage, Charlotte N. S. Horner, L. P. Weston, J. D. Kingsbury—*Committee.*

VEGETABLES.

The Committee on Vegetables have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

$3. First premium, to R. Jaques, Newbury, for Edmands beets.

3.00. First premium, to R. Jaques, Newbury, for Eclipse beets.

3.00. First premium, to Virgil Dow, Methuen, for Dewings beets.

3.00. First premium, to W. B. Little, Newbury, for Short Horn carrot.

3.00. First premium, to W. B. Little, Newbury, for Long Orange carrot.

3.00. First premium, to Warren K. Cole, Boxford, for half long carrot.

3.00. First premium, to Edwin Bates, Lynn, for Mangold Wurtzels.

3.00. First premium, to H. A. Stiles, Middleton, for White Flat turnip.

3.00. First premium, to O. G. Cilley, Hamilton, for Purple Top turnip.

3.00. First premium, to R. Jaques, Newbury, for parsnips.

3.00. First premium, to M. B. Abbott, Andover for White ruta bagas.

3.00. First premium, to R. Jaques, Newbury, for Yellow ruta bagas.

3.00. First premium, to E. G. Hardy, Andover, for corn in milk.

3.00. First premium, to Cochickewick farm for sweet corn.

3.00. First premium, to Andrew Lane, Rockport, for cranberries.

2.00. Second premium, to W. K. Cole, Boxford, for cranberries.

1.00. Third premium, to H. M. Killam, Boxford, for cranberries.

1.00. Gratuity, to A. C. Cilley, Hamilton, for Koll Rabbi.

1.00. Gratuity, to S. C. Doble, Andover, for Mammoth sweet corn.

5.00. Gratuity, to Cochickewick farm, No. Andover, for collection of vegetables.

Wm. P. Bailey, O. L. Kent—*for the Committee.*

$2.00. Second premium, to S. P. Buxton, Peabody, for Drumhead Stone Mason cabbage.

3.00. First premium, to S. P. Buxton, Peabody, for Marblehead squash.

2.00. Second premium, to S. P. Buxton, Peabody, for cauliflower.

3.00. First premium, to F. A. Russell, Methuen, for Bay State squash.

1.00. Gratuity, to Rufus Goodwin, Haverhill, for Empire State potatoes.

2.00. Second premium, to Cochickewick farm, No. Andover, for deep head cabbage.

3.00. First premium, to Cochickewick farm, No. Andover, for all seasons cabbage.

3.00. First premium, to Moses B. Abbott, Andover, for cauliflower.

3.00. First premium, to Moses B. Abbott, Andover, for Savoy cabbage.

3.00. First premium, to W. Burke Little, Newbury, for Early Rose potatoes.

1.00. Gratuity, to W. Burke Little, Newbury, for Everett potato.

3.00. First premium, to W. Burke Little, Newbury, for Marrow squash.

3.00. First premium, to G. S. Armstrong, Lawrence, for Cantelope melon.

3.00. First premium, to R. Jaques, Newbury, for Sibley squash.

3.00. First premium, to R. Jaques, Newbury, for Yellow Flat onions.

3.00. First premium, to R. Jaques, Newbury, for Red onions.

1.00. Gratuity, to R. Jaques, Newbury, for Marrow squash.

2.00. First premium, to R. Jaques, Newbury, for Salmon Fleshed melon.

3.00. First premium, to Edwin Bates, Lynn, for Acme tomatoes.

1.00. Gratuity, to A. P. Fuller, No. Andover, for Essex Hybrid squash.

1.00. Gratuity, to A. P. Fuller, No. Andover, for Clarke's No. 1 potatoes.

3.00. First premium, to Chas. A. Mason, Beverly, for Beauty of Hebron potatoes.

1.00. Gratuity, to L. S. Wilkins, Topsfield, for Champion tomatoes.

1.00. Gratuity, to N. R. Bailey, Andover, for White Plume celery.

2.00. First premium, to Virgil Dow, Methuen, for water melon.

3.00. First premium, to W. K. Cole, Boxford, for Clarke's No. 1 potatoes.

5.00. First premium, to J. J. H. Gregory, Marblehead, for collection of vegetables.

1.00. Gratuity, to W. K. Cole, Boxford, for Beauty of Hebron potatoes.

1.00. Gratuity, to W. K. Cole, Boxford, for Pearl of Savoy potatoes.

2.00. First premium, to A. P. Fuller, No. Andover, for Musk melon.

2.00. First premium, to John Maney, Lawrence, for White Plume celery.

1.00. Gratuity, to A. C. Cilley, Hamilton, for Early Rose potatoes.

3.00. First premium, to A. C. Cilley, Hamilton, for Pearl of Savoy potatoes.

1.00. Gratuity, to Aaron Low & Son, Essex, for Early Peerless tomatoes.

3.00. First premium, to Aaron Low & Son, Essex, for Essex Hybrid tomatoes.

3.00. First premium, to Aaron Low & Son, Essex, for Cardinal tomatoes.

3.00. First premium, to Aaron Low & Son, Essex, for Emery tomatoes.

3.00. First premium, to David Warren, Swampscott, for Essex Hybrid squash.

3.00. First premium, to David Warren, Swampscott, for Deephead cabbage.

3.00. First premium, to David Warren, Swampscott, for Stone Mason cabbage.

2.00. Second premium, to David Warren, Swampscott, for American Improved Savoy cabbage.

2.00. Second premium, to David Warren, Swampscott, for Red cabbage.

3.00. First premium, to David Warren, Swampscott, for Yellow Danvers onions.

3.00. First premium, to F. A. Russell, Methuen, for Hubbard squash.

1.00. Gratuity, to E. A. Emerson, Haverhill, for New Queen potatoes.

1.00. Gratuity, to J. J. H. Gregory, Marblehead, for Red Cross tomato.

3.00. First premium, to J. J. H. Gregory, Marblehead, for American Turban squash.

3.00. First premium, to E. & C. Woodman, Danvers, for Livingston's perfection tomatoes.

3.00. First premium, to F. A. Russell, Methuen, for Red cabbage.

1.00. Gratuity, to John H. George, Methuen, for Danvers onions.

3.00. First premium, to Simon P. Buxton, Peabody, for collection of tomatoes.

E. A. Emerson, E. A. Fuller—*for the Committee.*

GRAIN AND SEED.

The Committee on Grain and Seed have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$1.00. First premium, to H. A. Stiles, Middleton, for one peck Field corn.

1.00. First premium, to James C. Poor, No. Andover, for one peck White oats.

1.00. First premium, to Cochichewick Farm, No. Andover, for one peck Winter rye.

1.00. First premium, to B. H. Farnham, No. Andover, for one peck Field beans.

1.00. First premium, to J. O'Connor, West Newbury, for one peck Yellow Eye beans.

5.00. First premium, to Geo. W. Chadwick, Boxford, for 25 ears Lackawana corn.

3.00. Second premium, to Mrs. John Stevens, Lawrence, for 25 ears Longfellow corn.

2.00. Third premium, to H. W. Killam, Boxford, for Angel of Midnight corn.

3.00. First premium, to Alfred K. Nason, Boxford, for 25 ears of Rice Pop corn.

2.00. Second premium, to S. H. Bailey, No. Andover, for 25 ears Rice Pop corn.

4.00. Third premium, to S. P. Buxton, Peabody, for collection of Field and Garden seeds.

Nathan A. Bushby, Daniel D. Adams, Chas. A. Mason —*Committee.*

COUNTERPANES AND AFGHANS.

The Committee on Counterpanes and Afghans have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$4.00. First premium, to Mrs. James Wall, Methuen, for Lace quilt.

2.00. Second premium, to Mrs. P. A. Fuller, Lawrence, for Silk quilt.

1.50. Gratuity, to Miss Ella F. Davis, Lawrence, for Silk quilt.

1.00. Gratuity, to Mrs. Donman Blanchard, No. Andover, for Silk and Crochet quilt.

.50. Gratuity, to Mrs. John Reddy, Lawrence, for Outline quilt.

1.00. Gratuity, to Mrs. G. S. Armstrong, Lawrence, for Afghan.

2.00. Gratuity, to Miss Lizzie Huse, Lawrence, for Bed spread and shams.

1.00. Gratuity, to Mrs. W. L. Steele, Lawrence, for Silk log cabin quilt.

1.00. Gratuity, to Mrs. Hannah Danforth, Lawrence, for Print quilt.

.50. Gratuity, to Miss Clara M. Bell, Andover, for Silk quilt.

.75. Gratuity, to Miss Mary Lewis, Lawrence, for Wheel Afghan.

.50. Gratuity, to Mrs. M. C. Wheelock, Lawrence, for white Knit quilt.

.50. Gratuity, to Miss Ida Merrill, Lawrence, for Afghan.

1.00. Gratuity, to Mrs. S. J. Pedlar, Methuen, for Knit quilt.

2.00. Gratuity, to Mrs. W. Heald, Lawrence, for Afghan.

1.00. Gratuity, to Mrs. H. M. Whitney, Lawrence, for Afghan.

1.00. Gratuity, to Mrs. M. S. Harmon, Lawrence, for Calico quilt.

.75. Gratuity, to Miss S. R. Day, Bradford, for white Knit quilt.

.50. Gratuity, to Mrs. A. T. Lea, Methuen, for Baby Afghan.

.50. Gratuity, to Mrs. B. A. Ellis, Methuen, for Silk quilt.

.75. Gratuity, to H. G. Little, Haverhill, for Patchwork quilt.

.50. Gratuity, to Miss Coburn, Methuen, for Silk quilt.

Lottie Swan, Mrs. T. C. Thurlow, Sarah P. Blunt—*Committee.*

CARPETINGS AND RUGS.

The Committee on Carpetings and Rugs have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$3.00. First premium, to Mrs. John H. Perkins, Lynnfield, for rug.

2.00. Second premium, to Mrs. J. W. Poor, Andover, for rug.

1.00. Gratuity, to Miss Durrell, Lawrence, for Silk rug.

1.00. Gratuity, to Mrs. B. J. Manion, No. Andover, for Drawn rug.

1.00. Gratuity, to Mrs. E. S. Mann, Methuen, for Knit rug.

1.00. Gratuity, to Mrs. Moses E. Cook, Newburyport, for Braided mat.

1.00. Gratuity, to Mrs. D. A. Moulton, No. Andover, for Drawn rug.

1.00. Gratuity, to Mrs. Granville E. Stevens, Methuen, for Knit rug.

1.00. Gratuity, to Mrs. Hannah Danforth, Lawrence, for Drawn rug.

1.00. Gratuity, to Mrs. M. A. Sargent, Lawrence, for Worsted rug.

75c. Gratuity, to Miss Abbie Towne, No. Andover, for Fancy rug.

75c. Gratuity, to Mrs. F. A. Sargent, Merrimac, for Braided rug.

75c. Gratuity, to Mrs. Mary McPhee, Lawrence, for Drawn rug.

75c. Gratuity, to Mrs. James Starbird, Lawrence, for Braided rug.

50c. Gratuity to Mrs. F. A. Sargent, Merrimac, for Braided rug.

50c. Gratuity, to Mrs. C. Y. Eaton, Methuen, for Knit rug.

50c. Gratuity, to Mrs. Asa Hardy, Groveland, for Drawn rug.

50c. Gratuity, to Miss Searle, Methuen, for Silk rug.

Mrs. W. C. Allyn, Mrs. Oscar Young, Mrs. G. L. Burnham—*Committee.*

MANUFACTURES FROM LEATHER.

The Committee on Articles Manufactured from Leather have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

$5. First premium, to McDonald & Hanaford, No. Andover, for Buggy harness.

$2. Gratuity, to McDonald & Hanaford, No. Andover, for Coupe harness.

$3. Gratuity, to J. O. Nash, Lawrence, for Carryall harness.

$2. Gratuity, to J. O. Nash, Lawrence, for Wagon harness.

Lyman Osborne, Geo. F. Sanger, F. H. Appleton—*Committee.*

FANCY WORK.

The Committee on Fancy Work have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

75c. Gratuity, to Mrs. E. F. Manahan, Lawrence, for

cluster of flowers.

50c. Gratuity, to Mrs. John W. Porter, Lawrence, for travelling bag.

75c. Gratuity, to Mrs. John W. Porter, Lawrence, for sofa pillow.

75c. Gratuity, to Mrs. A. R. Sanborn, Lawrence, for chair back painting.

50c. Gratuity, to Miss E. F. Coburn, Methuen, for tray cloth.

75c. Gratuity, to Miss Nellie Coburn, Methuen, for crochet suspenders.

1.00. Gratuity, to Mrs. Emma Pulsifer, No. Andover, for two knitted scarfs.

50c. Gratuity, to Mrs. Arthur W. Bean, Lawrence, for lace work.

1.00. Gratuity, to Miss Annie Dunlap, Lawrence, for lace handkerchief.

50c. Gratuity, to Mrs. Julia E. Whittier, Lawrence, for blanket.

75c. Gratuity, to Miss Emma B. Joslyn, Lawrence, for scarf.

1.00. Gratuity, to Mrs. C. F. Whittridge, Lawrence, for Mexican silk table cloth.

50c. Gratuity, to Mrs. F. S. C. Herrick, Lawrence, for table cloth.

50c. Gratuity, to Mrs. F. S. C. Herrick, Lawrence, for lunch cloth.

50c. Gratuity, to Charlotte Swan, Methuen, for table cover.

75c. Gratuity, to Helen Barnes, Danvers, for set of underwear.

50c. Gratuity, to V. A. Whitmarsh, Lawrence, for crochet skirt.

50c. Gratuity, to Alice Maude Bennett, Lawrence, for cigar ribbon cover.

50c. Gratuity, to Miss Heeby, Lawrence, for linen apron.

75c. Gratuity, to Mrs. Carrie Wilson, Lawrence, for embroidered blanket.

50c. Gratuity, to Mrs. A. B. Davis, Lawrence, for point lace.

50c. Gratuity, to Mrs. S. H. Harris, Methuen, for table scarf.

75c. Gratuity, to Mrs. Phebe Merrill, Lawrence, for two white aprons.

50c. Gratuity, to Mrs. C. Ham, Lawrence, for crochet lace.

50c. Gratuity, to Mrs. E. W. Godfrey, Lawrence, for felt table scarf.

1.00. Gratuity, to Mrs. George S. Merrill, Lawrence, for lunch set.

75c. Gratuity, to Mrs. W. H. Salisbury, No. Andover, for lunch set.

1.00. Gratuity to Mrs. S. U. Grant, Lawrence, for hand painted tidy.

50c. Gratuity, to Mrs. M. Madden. Lawrence, for pillow shams.

50c. Gratuity, to Annie Marshland, Lawrence, for silk scarf.

50c. Gratuity, to Mrs. S. B. Pope, Danvers, for table cover.

75c. Gratuity, to Mrs. Walter Rowe, Lawrence, for lunch cloth.

1.00. Gratuity, to Mrs. Walter Rowe, Lawrence, for sofa pillow.

50c. Gratuity, to Mrs. Walter Rowe, Lawrence, for centre table piece.

50c. Gratuity, to Mary Agnes Gage, Lawrence, for Roman stripe.

50c. Gratuity, to Alice Russell, Methuen, for lace handkerchief.

1.00. Gratuity, to Ethel Emerson, Lawrence, for set of underwear.

75c. Gratuity, to Eliza L. Scott, Lawrence, for two table scarfs.

50c. Gratuity, to Julia A. Perley, Georgetown, for crochet shawl.

50c. Gratuity, to Louise Kimball, Georgetown, for silk stockings.

50c. Gratuity, to Belle Anderson, Topsfield, for crochet edgings.

75c. Gratuity, to Mrs. H. N. Coburn, Methuen, for Mexican handkerchief.

50c. Gratuity, to Alice George, Groveland, for basket and fan.

50c. Gratuity, to Alice George, Groveland, for Mexican tidies.

75c. Gratuity, to Alice George, Groveland, for white apron.

1.00. Gratuity, to Mrs. Walter Rowe, Lawrence, for embroidered blanket.

1.00. Gratuity, to A. C. Crowell, Lawrence, for screen.

1.00. Gratuity, to L. D. Whittier, Lawrence, for bureau scarf.

E. P. Nichols, Mrs. E. F. Childs, Emma F. Russell—*Committee.*

WORKS OF ART.

The Committee on Works of Art have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$1.00. Gratuity, to M. A. Greeley, Lawrence, for oil painting.

1.00. Gratuity, to M. E. Nason, No. Andover, for oil painting.

50c. Gratuity, to Anson L. Griffin, Lawrence, for white owl.

1.00. Gratuity, to Mrs. Chas. T. Main, Lawrence, for water color.

50c. Gratuity, to Samuel Wilde, Lawrence, for brackets.

1.00. Gratuity, to Mrs. Geo. H. Eaton, Lawrence, for china painting.

1.00. Gratuity, to S. E. Dwyer, Salem, for oil painting.

1.00. Gratuity, to Mrs. Fred Swain, Methuen, for oil painting.
50c. Gratuity, to Martin M. Wood, West Newbury, for hat rack.
1.00. Gratuity, to Mrs. E. S. Chase, Methuen, for oil painting.
1.00. Gratuity, to M. Swett, Lawrence, for china painting.
1.00. Gratuity, to Edith M. Messer, Lawrence, for leather table cover.
1.25. Gratuity, to Mrs. E. Bicknell, Lawrence, for china painting.
1.00. Gratuity, to Mrs. Dr. Howard, Lawrence, for china painting.
1.00. Gratuity, to L. Foster, Methuen, for china painting.
1.00. Gratuity, to Mary Williams, No. Andover, for oil painting.
1.00. Gratuity, to Mrs. A. B. Bruce, Lawrence, for china painting.
1.00. Gratuity, to Mrs. D. F. Conlon, Lawrence, for china painting.
2.00. Gratuity, to Sallie Cross, Lawrence, for water color.
1.00. Gratuity, to Mr. G. F. Cannon, Lawrence, for penmanship.
1.00. Gratuity, to L. Florence Cammett, Amesbury, oil painting.
1.00. Gratuity, to Mrs. Woodford, Lawrence, for china painting.
2.00. Gratuity, to W. H. Plummer, Lawrence, for oil painting.
1.00. Gratuity, to Henrietta Safford, Lawrence, for oil painting.
1.00. Gratuity, to Henrietta Safford, Lawrence, for china painting.
1.00. Gratuity, to Henrietta Safford, Lawrence, for crayon painting.
1.00. Gratuity, to Mrs. Howard I. Smith, Lawrence, for oil painting.

2.00. Gratuity, to Mrs. C. F. Whittredge, Lawrence, for china painting.

1.50. Gratuity, to E. O. Woodford, Lawrence, for china painting.

1.00. Gratuity, to E. O. Woodford, Lawrence, for oil painting.

1.00. Gratuity, to Mrs. A. R. Sanborn, Lawrence, for oil painting.

1.00. Gratuity, to Kate M. Clark, Lawrence, for china painting.

1.00. Gratuity, to Carrie Wainwright, Lawrence, for china painting.

1.00. Gratuity, to G. Copp, Lawrence, for oil painting.

1.00. Gratuity, to the Enterprise Portrait Co., Lawrence, for exhibit.

1.00. Gratuity, to Clara Hood, Lawrence, for china painting.

50c. Gratuity, to Miss Morrison, Lawrence, for pen and ink linen.

1.00. Gratuity, to Amanda French, Methuen, for oil painting.

50c. Gratuity, to Edmund Ketchum, Lawrence, for water color.

1.00. Gratuity, to W. H. Allen, Lawrence, for pastel portrait.

1.50. Gratuity, to Samuel Hogle, Lawrence, for frames.

1.00. Gratuity, to Charlotte Swan, Methuen, for oil painting.

1.00. Gratuity, to Charlotte Swan, Methuen, for china painting.

1.00. Gratuity, to Mrs. C. E. F. Clark, Lawrence, for china painting.

1.00. Gratuity, to Mrs. C. R. Stanley, Lawrence, for china painting.

1.25. Gratuity, to Bessie Swan, Methuen, for china painting.

1.00. Gratuity, to Mrs. Thomas H. Murray, Lawrence, for oil painting.

1.00. Gratuity, to Mrs. H. Lyford, Lawrence, for oil painting.

The committee would express the gratification afforded by the arrangements for the exhibition, and tender thanks to the city government, who cheerfully, though at great inconvenience, removed furniture, draperies, &c., from their commodious hall. The art exhibition was thereby unified, a critical examination rendered easy, and visitors were enabled to perceive details, so desirable to those in quest of profit, as well as pleasure.

Worthy of especial mention was the case of china entered by Mrs. W. H. Giles, of Lawrence, who requested that it should receive no award. Its superiority was manifest to all, and we feel that hearty thanks are due, especially from amateurs, for such an incitement to effort.

The remainder of the exhibit, with the exception of Mrs. C. F. Whittridge's porcelain, and a water color painting by Miss Sallie Cross, was so uniformly meritorious that it was found exceedingly difficult to apportion $50 among forty-four exhibitors, giving not less than fifty cents, nor more than three dollars to one person.

The award to Mr. W. H. Plummer of Lawrence, two dollars, the highest, was based on the assurance that he had never received instruction.

The award to Mr. S. Hogle of Lawrence, for frames, was based on the artistic ornamentation with a composition discovered by him.

A platter, entered by Mr. G. H. Tuttle of North Andover, which was at the first fair, seventy-one years ago, attracted much attention, as did many other pieces of great age, which had been kindly loaned.

Susan P. Boynton, Mrs. George W. Russell, Bessie Swan, Alice Gray Foster—*Committee*.

CHILDREN'S WORK.

The Committee on Children's Work have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$2.00. Second premium, to Beulah I. Lee, Methuen, for paper cutter and two dolls.

1.00. Gratuity, to Holland Little, Haverhill, for sofa pillow.

1.00. Gratuity, to Bertha Merrill, Lawrence, for crochet skirt.

75c. Gratuity, to Eva Welton, Methuen, for work bag, bureau scarf and splasher.

50c. Gratuity, to Mary E. Cotter, Lawrence, for apron and pair of drawers.

50c. Gratuity, to Mary Brewster, Lawrence, for lamp mat.

50c. Gratuity, to Mary Brewster, Lawrence, for tidy.

50c. Gratuity, to Sadie Taylor, Lawrence, for apron.

Alice M. Russell, Mrs. L. B. Currier, Mrs. G. L. Burnham—*Committee.*

MANUFACTURES AND GENERAL MERCHANDISE.

The Committee on Manufactures and General Merchandise have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$1.00. Gratuity, to George A. Morris, Lawrence, for case of horse shoes.

50c. Gratuity, to J. L. Wales, Haverhill, for three chairs.

3.00. Gratuity, to M. E. Austin & Co., Lawrence, for case of hardware, case of tools, case of cutlery.

50c. Gratuity, to George A. Rogers, No. Andover, for copy of farm account book.

1.00. Gratuity, to Scollay & Ruth, Lawrence, for diamond metal polish.

1.00. Gratuity, to Byron Trull & Co., Lawrence, for carpet sweepers.

50c. Gratuity, to Robert B. Smith, North Andover, for two tables.

3.00. Gratuity, to Butler File Co., Lawrence, for case of files.

3.00. Gratuity, to H. B. Robinson, Lawrence, for case of confectionery.

50c. Gratuity, to E. H. McDuffee, Lawrence, for loom.

3.00. Gratuity, to Mrs. Howard Smith, Lawrence, for case of celuloid goods.

1.00. Gratuity, to William Sellars, Haverhill, for portable hot water heater.

2.00. Gratuity, to Hugo Burtt, Lawrence, for case of jewelry.

Diplomas, awarded to the Pacific, Arlington, and Everett Mills, for the extensive and beautiful exhibition of the production of their mills.

The committee also desire to make special mention to the Altantic Mills, for its fine and valuable display of goods.

The display of the Pemberton Mills was also especially notable.

Diploma, to the Russell Paper Co., of Lawrence, for display of paper goods.

Diploma, to Craighead & Kintz, Ballardvale, for bronze goods.

Diploma, to Wright Manufacturing Co., Lawrence, for Stearns braids.

Diploma, to Briggs & Allen Manufacturing Co., for display of mantles.

Geo. E. Herrick, John H. George, Bertha H. Chandler, W. H. Gile—*Committee.*

GRANGE EXHIBIT.

The Committee on Granges have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$40. First premium, to the Andover Grange, for exhibit.

$30. Second premium, to the Methuen Grange, for exhibit.

$20. Third premium, to the North Andover Grange, for exhibit.

$10. Fourth premium, to the West Boxford Grange, for exhibit.

$10. Gratuity, to the Haverhill Grange, for exhibit.

Sherman Nelson, Asa T. Newhall, Mrs. David Warren, Francis H. Appleton—*Committee.*

THE GRANGE EXHIBIT OF 1891.

The Trustees, at a special meeting in February, 1891, decided to offer four prizes of $40, $30, $20 and $10, respectively, for exhibits by the different Granges in Essex County, to include all fruit, vegetables and domestic manufactures that were exhibited in any other department in Exhibition Hall. I believe that I am correct in saying that a "Grange" is a local branch of the "Patrons of Husbandry," which is an organization for mutual benefit among farmers and covers a considerable part of the United States.

The whole basement of a church, adjoining the Exhibition Hall, was used for this purpose, and a most interesting and creditable exhibit was there displayed. It was a notable exhibit.

By the most recent list at my command, I find in Essex County, there are granges in Amesbury, North Andover, Ipswich, West Newbury, Haverhill, Methuen, Merrimac, Andover and Topsfield.

Of these Andover, Methuen, North Andover, West Boxford, and Haverhill made exhibitions and were awarded prizes after careful examination by the Committee, in the order named.

Stepping into the vestibule of the building, where these granges made their display, we will pass through a door on the right into the largest of these rooms, where, on the right, or street side, was the Andover display, opposite the door West Boxford was located, while on the left side was the

Haverhill exhibit: then, countermarching to the left, we enter by double-doors the room containing the North Andover grange by itself; while to our left again, and at left of the vestibule, was the third room filled by the Methuen grange.

The exhibits were placed with much care and taste, attracting many people during the two days of the Fair. The vegetables and fruits were judiciously selected, and flowers and decorated articles were numerous and well placed. The needlework and decorative painting on china, silk, etc., showed practice and study, and proved that the more intelligently prepared works of art were understood in our county, and the increasing appreciation of them in the county at large is known to our Essex County citizens, students and artists.

The members of these granges showed that they had been united in their efforts to obtain a good collection of the proper articles, which is not difficult under such circumstances.

These displays were instructive in many ways to our citizens on account of the quality and varied character of the several exhibits; on account of proof that united effort is sure to bring a good degree of success; and as showing our people what the farmers of the several towns in our county can do for the credit of their home, if the members will unite under committees in the several places to send loads of home products to our annual show.

We need to make special efforts to bring about the best results. Our Society has the highest of reputations in the State and we must value it highly and preserve and advance it.

In Worcester, the present year, a liberal agriculturist desiring to encourage good farming offered prizes of generous amounts for exhibits of collections of a certain farm product, and the granges of the same neighborhood decided to exhibit like collections of the same article near by and at about the same time. There were ten entries for the ten

prizes, and a considerable larger number at the granges hall. Both displays have been reported to me as being fine.

I think we here see again proof of the great value to the individual of organized effort, and also the same to the public.

In union there certainly is strength.

This is certainly a lesson for our own members to ever have before them in their work, and in it lies every possibility for success.

Our Fairs, our Institutes, our usefulness to our State Board of Agriculture, to our Agricultural College and Experiment stations, and their value to us as agriculturists, depends directly upon our members working together for good results in all these directions.

We also have in our county and promoting the object of our society :—Farmer's Clubs, or Horticultural and Landscape Improvement Societies, in Lynn, Salem, Marblehead and Swampscott, Gloucester, Beverly, North Andover, West Peabody, Rowley, West Newbury and Danvers, with probably others that are at present unknown to the writer, and not on record at office of the State Board of Agriculture.

The Essex County Poultry Association also exists and at one time was active when there were special demands for its work.

But the granges that exhibited at Lawrence set us an example at the Fair of 1891 in Lawrence, by which our society should profit through our members.

Let a noble effort be made next year, in all directions, to fill our halls with the products of the farms from all over Essex County; let each locality send, by united and individual effort, teams filled with such as we would attract by our premium list; and in the same proportion let our people flock together to renew and enlarge that useful acquaintance-ship which is peculiarly intimate among the agriculturists of old Essex.

We should indeed extend our congratulations to our members of the Granges who succeeded so well this year, and commend their example of the value of united action to attain good results to our members in general.

REPORT OF COMMITTEE ON IMPROVING WASTE LAND.

The Committee on Improving Waste Land have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

$15.00. First premium, to C. K. Ordway & Son, West Newbury.

10.00. Second premium, to C. Moynihan, Newbury.

STATEMENT OF C. K. ORDWAY & SON.

In 1888 we cut off the wood and brush and blowed out the stumps, turned the water in a different course, made a dam at the outlet of stone that it might not wash. We filled the creek that was ten feet wide with dirt. It was planted the first year without manure or fertilizer with potatoes and corn fodder. The cost of the work that was done was one hundred dollars.

		Dr.
1889.	The cost of work clearing land,	$100.00
	Cost of 5 cords manure,	25.00
	Ploughing and harrowing,	4.00
	Planting,	2.00
	Cutting and hoeing,	4.00
	Harvesting,	3.00
	Seed,	.50
1890.	Six cords of manure,	30.00
	Cabbage seed,	1.00
	Spreading manure, ploughing and harrowing,	4.00
	Planting,	2.00
	Harvesting,	3.00
1891.	Did not use any manure or fertilizer, sowed it with rye and grass seed,	
	Ploughing and harrowing,	3.00
	One and one-half bushels rye,	1.50
	Cost of improvement,	$183.00

		Cr.	
1888.	By ten cords of wood,	$20.00	
	Twenty-five bushels potatoes,	17.50	
	One ton corn fodder,	10.00	
1889.	By thirty bushels corn,	22.50	
	Two tons of cabbage,	40.00	
	One ton of stover,	8.00	
1890.	Cabbage sold,	100.00	
	Two tons of stover,	16.00	
1891.	Twenty bushels rye,	23.00	
	2495 lbs. of straw,	17.47	
	Improvement receipts,	———	$284.47
	Net profit,		$101.47

Respectfully submitted,

C. K. Ordway & Son.

STATEMENT OF C. MOYNIHAN.

I commenced the improvement of the pasture seven years ago, it being covered by bushes of various kinds; first I cut the bushes, next I ploughed the land. The first year I raised squashes, the crop yielding well; I put two cords of manure on four acres. The second year I planted it with potatoes and squashes, using about sixteen cords of stable manure, and I got 400 bushels of potatoes and five tons of squashes. Third year the crop was onions, potatoes, cabbage and carrots. I had 200 bushels of onions, 300 bushels of potatoes, between fifty and sixty dozen cabbage, two tons carrots. Fourth year all in corn, hoed it level and sowed to grass; had a good yield. Fifth, sixth and seventh years grass, had by estimate six tons of hay on the four acres each year.

Respectfully,

Cornelius Moynihan.

Geo. W. Adams, J. F. Smith, Charles O. Cummings—*Committee.*

REPORT OF COMMITTEE ON ROOT CROPS.

The Committee on Root Crops have attended to their duty, and respectfully report nine entries from eight competitors as follows :

E. C. Little, foreman of "Crystal Lake" farm, Haverhill, crop of onions.

John H. George, Methuen, crop of onions.

Chas. C. Blunt, Andover, crop of parsnips.

Henry A. Hayward, Andover, crop of cabbage.

Isaac H. Laney, Methuen, crop of potatoes.

James Manning, Topsfield, crops of onions and ruta baga turnips.

David Warren, Swampscott, crop of squashes.

Cornelius Moynihan, Newbury, crop of ruta baga turnips.

The first visit we made on Sept. 8 to see the crops of onions. Mr. Little met us in the city and we were driven by him about four miles out to the Crystal Lake farm, which is owned by Mr. Marsh. The onions were not all dried down but were making good progress ; they were on dark heavy loam where a mixed crop was grown the year before. They had suffered some from blight but were of good size and promised a good crop, and the committee regret that Mr. Little did not send in a statement.

After being hospitably entertained at dinner by Mr. and Mrs. Little we were driven by him to Methuen to see Mr. George's crop of onions. The crop was grown on a piece of reclaimed swamp land. Rows twelve inches apart, and at the time of our visit were all dried down, no scullions, no small ones. The piece was perfectly free from weeds. It is seldom so fine a crop of onions can be seen in this section.

The crop of potatoes entered by Mr. Laney is on land near Mr. George, but on examination was found not to contain the amount of land required (one half acre), and we did not feel justified to take it into consideration.

On Sept. 19 the committee visited Mr. Chas. C. Blunt,

of Andover, and looked at his crop of parsnips. The crop looked very thrifty and were about one half bottomed at the time of our visit. Mr. Blunt makes a specialty of raising parsnips, and markets the greater part of them in the spring. Mr. Jos. Blunt was kind enough to drive us over to Mr. Hayward's. The crop of cabbage looked thrifty and showed that they had plenty of plant food to feed upon.

On Sept. 21, we went to Topsfield to see Mr. Manning's crop of onions, they were grown on a side hill, dark, shallow loam. Mr. Manning had taken advantage of the fine weather and pulled them before we got there but they were lying on the ground and were well dried and of good size.

October 2nd, we went to Swampscott to see Mr. Warren's crop of squashes, which we found well ripened, even in size and very pure in stock; the crop was on light, gravelly loam. As Mr. Warren took us about his farm, we were shown a fine piece of onions grown on low meadow land, of good quality and size, but they were not entered for premium.

On October 13, we again visited Mr. Manning of Topsfield, to see his crop of ruta baga turnips; they were planted on a side hill, gravelly loam and had suffered to such an extent from drought that the committee did not feel justified in awarding him a premium.

On the same day, we visited Mr. Moynihan of Newbury; his crop of turnips as grown on a piece of reclaimed pasture, they were of good quality and of very even size, they were planted so far apart in the rows and many places were not transplanted, therefore he did not receive as large a crop as he otherwise would have.

We have awarded the premiums as follows:

$10. First premium, to John H. George, Methuen, for crop of onions.

$5. Second premium, to James Manning, Topsfield, for crop of onions.

$10. First premium, to Chas. C. Blunt, Andover, for crop of parsnips.

$10. First premium, to Henry A. Hayward, Andover, for crop of cabbage.

$10. First premium, to David Warren, Swampscott, for crop of squash.

$10. First premium, to C. Moynihan, Newbury, for crop of ruta baga turnips.

O. L. Carlton, John W. Frederick, Edward A. Fuller, Wilbur J. Munroe, John Perkins—*Committee.*

STATEMENT OF JOHN H. GEORGE, METHUEN, CONCERNING A CROP OF ONIONS RAISED 1891.

The crop of 1889 was grass, the crop of 1890 was potatoes, manured with one ton of Stockbridge potato manure to the acre, the soil is peat meadow, ploughed in the fall of 1890 about four inches deep. At the same time ploughed in about ten cords of manure to the acre, measured as correctly as could be done by throwing on to the cart without treading, on one-half the piece was put horse and cow manure, on which had been a hog, on one-half of the rest was put dry horse manure as drawn from a village stable, on the other quarter (except two rods square on which no manure of any kind was put) was spread cow manure drawn out and spread as made; the value of the manure was probably six dollars per cord on the piece.

The land in the spring was brushed with a brush harrow; dragged and sowed with three and three-quarters pounds of yellow Danvers onion seed from Peter Henderson & Co.'s seed house, New York City. The seed, I was assured by the firm, was tested and of good germination, and I should think every seed grew, came up as fine a stand as I ever saw; the maggots thinned them some on one end where the onions grew to immense size, eighty of them filling a bushel; they were not thinned at all by hand as I make it a practice not to thin onions no matter how thick they grow, believing it spoils the crop to do so. The yield was 564 bushels of very fine onions on 24,000 feet of land, of which

I have sold about 400 bushels at an average of seventy cents per bushel. The cost is as follows:

Crop of onions.	*Dr.*
5 cords of manure at $6,	$30 00
Ploughing, 1 horse and man, ½ day,	1 50
Bushing and dragging, man and horse, ½ day,	1 50
Sowing seed one-half day,	75
Hoeing five times,	3 75
Weeding four times, boy labor 16 days,	12 00
Cutting up and raking out, 1 day,	1 50
Picking up, topping and marketing, 5c. per bush.,	28 20
Interest and taxes on land,	6 00
3¾ lbs. seed at $1.20,	4 50
Cr.	
By 564 bushels onions at 70 cts.,	$394 80
Profit on crop,	305 10

Respectfully submitted,

JOHN H. GEORGE.

I hereby certify that I measured the land on which grew the crop of onions entered by John H. George of Methuen, with the Essex Agricultural Society and it measured 24,000 square feet.

I. H. LANEY.

STATEMENT OF JAMES MANNING, TOPSFIELD, ONION CROP.

I had on the half acre of land entered for premium, 342 bushels of onions of 52 pounds to the bushel.

I put three cords of stable manure on the half acre and ploughed it in four inches deep, sowed the seed the 23rd day of April, at the rate of six pounds to the acre.

	Dr.
To three cords manure at $6.00,	$18 00
Cost of seed, three pounds,	9 00
Ploughing,	1 75
Sowing seed,	75
Cost of weeding three times,	15 00
	$44 50

	Cr.
By 342 bushels onions at 80 cts.,	$273 60
Net profit,	229 10

Respectfully submitted,

JAMES MANNING.

This is to certify that I measured for Mr. James Manning 21,780 square feet of land out of his onion bed, or one-half acre.

JOHN H. TOWNE.

STATEMENT OF CHAS. C. BLUNT, ANDOVER.

The land occupied by the crop of parsnips which I enter for premium is a light loam with a gravelly subsoil. The crop in 1889 was parsnips with barn manure at the rate of seven cords per acre.

The crop of 1890 was onions, no barn manure was used but 1000 lbs. of phosphate. The land was ploughed in the fall of 1890 twelve inches deep, and barn manure eight cords to the acre, spread on and harrowed in, cross ploughed in the spring (no phosphate used this season), harrowed, brushed and raked, and sowed on the 15th day of April with four pounds of seed. As I usually leave a part of the crop in the ground over winter, as spring dug parsnips bring a good price, I have selected several rows, measured and weighed fifty-five pounds to the bushel, and the yield was at the rate of two hundred and eighty-eight bushels on the one-half acre.

COST OF CROP.

Preparation of land,	$3 75
Manure four cords,	24 00
Hoeing, weeding and thinning,	20 00
Seed and sowing,	3 00
Harvesting,	10 00
	$60 75

288 bushels parsnips at 90 cts.,	$259 20
Profit,	$198 45

Respectfully submitted,
C. C. Blunt.

This certifies that I have measured a tract of land having on it a crop of parsnips owned by Chas. C. Blunt of Andover and entered by him for a premium, and find it contains eighty square rods. Samuel Thayer.

Having measured a portion of the parsnips on the above piece, the yield is at the rate of two hundred and eighty-eight bushels on one-half acre, of fifty pounds to the bushel.
Samuel Thayer.

STATEMENT OF HENRY A. HAYWARD, ANDOVER.

The crop of cabbages which I enter for premium was grown on one acre of land. The land is a dark loam with clay subsoil. It had been in grass for ten years, the sward was turned under, ploughed eight inches deep. Eleven cords of stable manure (measured) was spread on and harrowed in. Ames fertilizer was used in the hill, nine hundred pounds to the acre, planted the 20th day of June in hills about twenty inches apart. Seed used David Warren's Stone Mason, one-half pound, afterward thinned to one plant to a hill, cultivated twice, hoed twice, weeded once, put in beds the last of October.

COST OF CROP.

Ploughing land,	$5 00
Manure at $7 per cord,	77 00
Furrowing and preparing hill,	2 50
Planting,	1 50
Cultivating and hoeing twice,	10 00
Fertilizer,	14 40
Harvesting,	12 00
Seed,	1 50
Total cost of crop,	$93 90

Henry A. Hayward.

This certifies that I estimate the cabbage raised by Henry A. Hayward, on one acre of land to be four hundred barrels or twenty tons.

S. H. Bailey.

I hereby certify that I have measured a field of cabbage for Henry A. Hayward, entered for premium and find it contains one acre.

C. C. Blunt.

STATEMENT OF DAVID WARREN, SWAMPSCOTT.

The crop of Essex Hybrid squashes which I enter for premium was raised on land that is a gravelly loam, the crop of 1889 was cabbage seed, 1890 potatoes. Stable manure applied each year at the rate of eight cords to the acre. The present year I ploughed it about six inches deep in the spring. Stable manure put on with Kemp's spreader, eight cords to the acre, wheel harrowed in, furrowed out, eight feet apart each way, planted four seeds to a hill the first week in May, cultivated three times, hoed twice.

COST OF CROP.

Rent of land,	$8 00
Ploughing,	2 50
Manure, eight cords at $4.00,	32 00
Furrowing,	1 50
Planting,	1 00
Cultivating and hoeing,	6 00
Harvesting,	6 00
Seed,	2 00
	$59 00

I had fifteen loads and weighed three of them which averaged 2185 pounds to a load, making 32,775 pounds of marketable squashes.

David Warren.

This certifies that a piece of land measured by me contained two hundred and one rods of squashes, raised by David Warren of Swampscott.

ALLEN ROWE.

STATEMENT OF CORNELIUS MOYNIHAN, NEWBURY.

The crop of ruta baga turnips that I enter for premium grew on new land broke up this spring. I put on at the rate of seven cords of barn cellar manure to the acre, spread broadcast and harrowed in. I then opened furrows three feet apart and filled them in as though I were covering potatoes, and sowed the seed by hand. I weighed or had weighed, three separate baskets, sixty pounds to the bushel and measured the rest in the same basket. There were 304 bushels of good merchantable turnips on one-half acre.

COST OF CROP.

Ploughing and leveling,	$4 00
Manure three and one-half cords,	21 00
Seed and sowing same,	1 50
Cultivating once,	1 00
Weeding and thinning twice,	6 00
Harvesting,	7 00
	$40 50
Value of 304 bushels turnips at 35 cts.,	106 40
Profit,	$65 90

Respectfully,

C. MOYNIHAN.

REPORT OF COMMITTEE ON ORNAMENTAL TREES.

To the Trustees of the Essex Agricultural Society:

GENTLEMEN:—On June 30th, the chairman of your committee on forest trees received notice from our secre-

tary, under date of June 29th, that Mr. James Flint of Middleton, had entered his planting of trees for premium.

Your chairman immediately wrote to Mr. Flint to make an early appointment to visit his home, but affliction in Mr. Flint's family made delay necessary, and for various reasons, the visit to his trees was necessarily postponed until Thursday, October 8th.

The morning of this day was cold and stormy but your chairman made a second visit to Mr. Flint's, the first visit having been an informal inspection, Mr. Flint's home being within driving distance. No others of the committee were on the ground at the appointed hour, and the following report is entirely by your chairman.

Mr. Flint's house is not far from the Paper Mills station on the Salem and Lowell Branch of the Boston and Maine system, just beyond that lovely bit of scenery which greets the eye as the bridge over the Ipswich river at that point is crossed. It is seldom that a prettier bit of such scenery, trees overhanging a lovely river, is found this side of the mountains.

The house is at the meeting of three roads and affords excellent opportunity for varied planting and treatment. One road leads to Salem about eight miles, one to North Reading three miles, and one to Middleton Village two and one-half miles.

Mr. Flint's efforts and interest in the protection and decoration of his place by trees, began a number of years ago, and he takes great pleasure in them.

There were over forty rock maples along parts of the roadside looking well, that had been set thirty to forty years and which came from New Hampshire.

On the road leading towards Middleton, there were about thirty Honey Locusts which were raised from seed that Mr. Flint planted.

He had twenty elms and two lindens.

Mr. Flint sets an example well worth noting when he plants pine trees on the windward side of the road to keep back the snow in the winter season. It seems to the

writer that this grand tree of New England is also appropriate as a roadside tree on the north, or northerly side of roads for such purposes as Mr. Flint thus emphasizes ; and especially for the reason that in the spring, when it is the season for the roads to thaw out, these beautiful evergreens can not by their shade hinder the process of nature.

Deciduous trees on the more sunny sides, and evergreen on the other sides of roads that are in service all the year round seems a wise disposition of natural beauty of the kind we have under discussion.

There was a picturesque pine tree in his yard, that he set when young, or about sixty years ago, that measures around near the ground about nine feet, and is over seventy feet in height ; there was also a large willow that he helped set about sixty years ago which measures near the ground, sixteen and a half feet, while five feet higher it measures fifteen and a half feet.

A fine ash tree that stands in front of his house has the name of being about one hundred years old, and measures about thirteen feet, and is something over seventy-five feet high.

There were several fir balsams trimmed into shape, and six to seven feet high.

He had about forty rods of hemlock and arborvitæ hedges. Mr. Flint's experience is in favor of the hemlock hedges, which he considers the more hardy.

Your committee recommend the award of $10 to Mr. Flint for " ornamental trees, ten or more set on any street, road or farm, and cared for five years."

The whole subject of tree culture, and the judicious ornamentation of and protection to homesteads and farms, by the proper disposition of trees is being every year regarded as of increasing importance.

Much personal satisfaction comes, and is not long in coming, from the planting, care and enjoyment of the matured trees and shrubs.

In the writer's case not a tree existed immediately

about his house in Peabody, when it was built in 1874, but to-day it is well protected by many kinds of trees which were all very small trees set in nursery rows by him in 1869, when he left Cambridge and commenced his agricultural work.

Some of his trees as stated in last year's transactions, are twenty-four and more feet high, and afford delightful shade or ample protection from winds or snow.

This is only inserted here as an encouragement to others to plant and enjoy the results while yet young. At least the writer does not find reason to consider himself old as yet, and claims that his years are proof of the statement.

His trees are not in what is called good ground and even with this condition not in their favor they have proved a success. With good land greater success can be readily attained.

There are two important principles to guard against in the care and planting of all trees:—plant sufficiently close to have the trees protect each other well while young, and later cut out so that the individual trees shall not interfere in their growth, so as to negative the real object in planting, but allow them room to develop their natural beauty.

The adoption of this principle has been largely the reason why the farms and country houses of old England, have by the addition of natural causes, given that land the value and reputation which it has for landscape, beauty and good pasturage.

The beauty of the individual trees at Mr. Flint's proves the force of this reasoning.

Respectfully submitted for committee,

FRANCIS H. APPLETON, *President.*

REPORT OF COMMITTEE ON STRAWBERRIES AND OTHER SMALL FRUITS.

The Committee on Strawberries and other small fruits have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$10. First premium, to George J. Peirce, of West Newbury, for crop of strawberries.

$10. First premium, to Daniel Stiles, North Andover, for crop of blackberries.

Chas. P. Savory, Augustus Verry, Elias Andrews, Warren K. Cole—*Committee.*

STATEMENT OF GEORGE J. PEIRCE, WEST NEWBURY.

The piece of land that I enter for premium for strawberry crop was a wet swampy piece in my pasture, never cultivated before. In May, 1889, we mowed all the bushes, and ploughed it with four oxen and two horses, clearing off all rocks, bushes, etc., did some ditching and laid some tile to drain it, and sowed a part of it with oats, and planted part for a kitchen garden; had about four dozen cabbages, a few cucumbers, summer squashes, etc. In 1890 I ploughed and prepared my land for strawberries, put on three cords of manure, harrowed it in, and brushed and set the plants of the following varieties: Jessie, Bubuck, Cresent, Belmont, Prince of Berry, Sharpless and May King. Commenced picking June 15th, finished July 21st.

COST OF CROP.

1889.	Mowing bushes one day,	$1.50	
	Ploughing two days,	16.00	
	Clearing off rocks, bushes, etc.,	4.00	
	Ditching and drain tile,	20.00	
1890.	Ploughing,	4.00	
	Manure, three cords,	12.00	
	Harrowing,	1.00	
	Strawberry plants, 5000, at $3.00,	15.00	
	Setting and trimming three days,	4.50	
	Hoeing four times,	12.00	
	Salt hay for mulching, 1½ tons,	12.00	
1891.	Uncovering the bed,	1.00	
	Mulching them in the rows,	1.00	
	Picking berries, 2 cts. per qt.,	93.74	
	For marketing at 1 ct. per qt.,	46.87	
	Total expense,		$244.61

Cr.

By 6,000 plants sold and used,	$18.00	
" 4,687 quarts of berries, at an average price of 13 cts.,	609.31	
Net profit,		$346.70

This is to certify that I measured the land entered by George J. Pierce, for premium on strawberry crop, and it contains one hundred and eleven rods.

WILLIAM MERRILL.

STATEMENT OF DANIEL STILES, NO. ANDOVER.

The crop of blackberries, which I enter for premium was grown on three-eighths of an acre of land, which has been in bearing for several years. Variety, Wachusett.

EXPENSE OF CROP, 1891.

To 200 lbs. fertilizer,	$4.00	
Ploughing and cultivating,	.90	
Cutting out old stalks,	1.50	
Picking 1116 qts. berries at 1½ cts per qt.,	16.74	
		$23.14

Cr.

By 1116 qts. of blackberries at an average of 8 cts. per qt. at the door,	$89.28
Net profit,	$66.14

RASPBERRY CROP.

The following statement by Rev. L. H. Sheldon, Andover, is printed, there not being land enough to come under the rules for a premium.

Size of raspberry beds seven square rods. Variety of berries, "Cathlert" and "Ever Bearing." Planted in rows six feet apart. Bed ploughed and furrowed and vege-

tables raised between rows of raspberries the first year of planting, in 1890.

This year ran a cultivator between the rows in the early spring. Put all my sifted coal ashes from day to day under the hen roost during the winter and this spring put two horse cart loads on the bed. Called the loads worth $2 each; cost of cultivating the bed fifty cents. Clipped tops of vines this spring, leaving them three and four feet high.

Began picking July 10 and finished August 19. No. of baskets gathered, 356¼, or 11 bushels, 4¼ quarts. Price from 25 to 12½ cents per basket. Sold 305¾ baskets for $51.85. Used in the family 51½ quarts.

A large proportion of the crop was sold at wholesale, direct from the field, or to neighbors coming to the house after them, none peddled by the owner.

Respectfully submitted.

L. H. Sheldon.

REPORT OF COMMITTEE ON GRAIN CROPS.

The Committee on Grain Crops respectfully report that there were six entries, and we recommend the following premiums:

$10. First premium, to C. K. Ordway & Son of West Newbury, for oat crop.

$10. First premium, to Henry M. Killam, of West Boxford, for corn crop.

$5. Second premium, to C. K. Ordway & Son, of West Newbury, for corn crop.

$10. First premium, to Abel Stickney, of Groveland, for hay crop.

$10. First premium, to J. M. Pearl, of West Boxford, for barley crop.

Owing to an accident to the threshing machine and an unusual delay in receiving repairs from New York, Mr.

Pearl was not able to complete his statement before Nov. 1st, but the committee were well satisfied that his crop was worthy of the society's premium and we recommend it to him on condition that he furnish a full report in season for publication in the Transactions of the Society for the present year.

Mr. Pearl's crop was a very handsome one, perfectly free from weeds. He makes a specialty of raising an extra quality of English hay for market and prefers to seed down with barley. He also showed the committee a field of corn that we then thought would be worthy to compete for the premium.

At Messrs. Ordway & Son's, we viewed crops of rye, oats and corn. The rye was raised on land which has been reclaimed from an almost worthless condition to a very fine piece of tillage land. The crop was well worthy of premium, but the committee regret that on measuring the land it was found to contain a trifle short of an acre and therefore could not come within the rules of the society. The oat crop was a remarkably good one for so large a piece ; the whole field of over four acres averaging fifty-eight and a fraction bushels per acre. Messrs. Ordway use no manure when seeding with oats, but manure well the year before and in that way avoid raising a heavy crop of straw at the expense of the grain crop.

Messrs. Ordway and Killam both have heavy crops of corn. Mr. Killam's field contained three and a half acres and was a very even piece and we do not think he overestimates it stating that an acre would average as much as the portion which was weighed. It was the heaviest piece of corn for its size we ever saw, there being twin ears of large size upon nearly every stalk. Messrs. Ordway have the advantage of easier land to work and make a much larger showing of profit, but we are well aware that a farmer's profit largely depends upon his ability to figure it out. But whatever their profit may be, both Messrs. Ordway and Killam have raised crops which

would be a credit to any farmer either east or west, and they can find a use for their crops on their own farms and we have no doubt that their profit will equal that of many farmers who have discarded raising corn and who the present year have been marketing vegetables at low prices in exchange for high priced western grain.

Mr. Stickney's hay crop is also one of which any farmer could feel proud, he not only has a large yield, 2040 cubic feet of a solid bay of hay per acre, making with a second crop at least four tons per acre, but the quality of the crop is unusually fine for so large a yield. Mr. Stickney has literally made *two* spears of grass to grow, where but *one* grew before all over his farm and we think it fitting that such man should be one of the trustees of the Essex Agricultural Society, a position which Mr. Stickney has held for many years.

For the committee,

DANIEL A. CARLETON, *Chairman.*

STATEMENT OF HENRY M. KILLAM, BOXFORD, CORN CROP.

The crop of 1889 was hay, 1500 lbs. to the acre, no manure used. The crop of 1890, from 1200 lbs. to 1500 lbs. of hay, 200 to 300 lbs., phosphate used to the acre. Soil dark loam.

Ploughed in May, eight inches deep, thoroughly harrowed with tooth harrow. Cost of ploughing and harrowing per acre $8.00. Twenty-two loads of manure, thirty bushels to the load was used to the acre, fresh from the barn cellar, ploughed under. Valued at $2.00 per load. Finished planting May 20th.

Planted by hand three and one-half feet each way, variety used "Angel of Midnight." 600 lbs. phosphate to the acre, applied in the hill, cost $1.60 per hundred. Planted five kernels to the hill, and thinned to four stalks. Cost of seed and planting $4.50. Cultivated three times

each way and hoed twice. Cost of cultivating and hoeing $5.00 per acre.

The corn was cut and stooked in September, finished September 20th. Husked the last week in October. Cost of harvesting and husking $14.00.

I measured five rods, and stooked it strictly by itself on September 28, husked the same and weighed it October 26. The weight of stover on five rods was 443 lbs., making 14,176 lbs. to the acre at $5.00 per ton, $35.44. Ears of sound corn on five rods 267 lbs., making 213 3-5 bushels per acre, at 35 cents per bushel, $74.76. I think at least one acre of the field would average as heavy as these five rods.

Cost of ploughing one acre,		$8.00
" " Manure,		44.00
" " Phosphate,		9.60
" " Planting,		4.50
" " Hoeing,		5.00
" " Harvesting,		14.00
Total cost,		$85.10
	Cr.	
By Value of Stover,	$35.44	
" " " Corn,	74.76	
Total,		$110.20
Profit,		$25.10

Respectfully submitted,

HENRY M. KILLAM.

STATEMENT OF C. K. ORDWAY & SON, CORN CROP.

The corn was raised on a piece of land that has been in grass ten years, and received no manure or fertilizer during that time. In 1891 was ploughed in April, nine inches deep and harrowed, applied five cords of barnyard manure spread broadcast and harrowed with a Randall harrow, smoothed with a grain drag, marked three and one-half

feet each way, planted May 12, using eight quarts of corn. There was no fertilizer used on this corn.

COST OF CROP.		*Dr.*
To ploughing and harrowing,		$6 00
Manure, 5 cords,		25 00
Spreading manure and harrowing,		3 00
Seed and planting,		1 00
Hoeing and cultivating,		5 00
Topping corn,		2 00
Harvesting,		4 00
Harvesting stover,		2 00
Cost of crop,		$48 00
	Cr.	
By top stalks,	$16 00	
The corn weighed 6,650 lbs. or 95 bushels shelled corn,	95 00	
Stover, 2½ tons,	18 00	
Two-thirds of manure in land,	16 75	
Value of crop,	$145 75	
Profit,		$97 75

Respectfully submitted,

C. K. Ordway & Son.

This certifies that I measured the land on which the crop of corn was grown, entered for premium by C. K. Ordway & Son of West Newbury, and said land contained one acre.

Richard Newell.

STATEMENT OF OAT CROP.

1889, the piece was in grass.

1890, it was ploughed ten inches deep and harrowed, six cords of barnyard manure to the acre, spread broadcast, harrowed and planted with corn.

1891, the corn hills were split with a Randall harrow, ploughed seven inches deep, harrowed and sowed to oats, three bushels to the acre, without manure or fertilizer of any kind. Seed, White Dutch oats of my own raising, the soil is a clay loam.

COST OF CROP.	*Dr.*
To ploughing and harrowing,	$15 00
" sowing, harrowing and smoothing,	5 00
Seed, oats,	9 75
Cutting and binding with machine,	20 00
Drawing and moving,	5 00
Threshing and winnowing,	25 00
Cost of crop,	$79 79

	Cr.
By 7,680 lbs. or 240 bushels oats,	$120 00
3 tons of straw at $9.00,	27 00
Profit,	$67 25

Fifty-eight bushels and a fraction per acre.

Respectfully submitted,

C. K. Ordway & Son.

I hereby certify that I have measured the land on which the oats entered for premium grew owned by C. K. Ordway & Son, and it contains four acres and twenty-two rods.

Richard Newell.

STATEMENT OF ABEL STICKNEY, GROVELAND, HAY CROP.

The crop of English hay which I enter for the society's premium, was grown on one acre and sixty-four rods of land. This land slopes to the northwest, with a clay subsoil.

The crop for 1889 was barley, sown at the rate of two

bushels of barley, one bushel of red top, one-half bushel of Timothy, and six pounds of clover seed per acre. About seven and one-half cords of barnyard manure was applied to the whole piece, ploughed under six inches deep. The two previous years this land was planted with corn, having both years a good crop, about six cords of barnyard manure, spread broadcast, and two hundred pounds of fertilizer per acre, put in the hill each year.

The result of the crop of 1889 was a large barley hay lodged badly, injured the grass roots some, but as it was very wet after the barley was cut, it revived so that a very good crop was cut in September.

In 1890 a large crop of clover hay was secured, nearly as much bulk as was cut the present year, also a handsome second crop of clover cut in August.

The crop which your committee had their attention called to was cut June 27, mowed by machine and also raked by horse, put in cock in the usual way in this vicinity, spread and put in barn as soon as convenient. After the hay was well settled (October 3rd), it contained 2,856 cubic feet, it being 2,040 cubic feet to the acre or twelve and three-fourths feet to the rod. The expense of securing this crop was about fifteen dollars. In September a rowen crop was taken from this land, but owing to the dry weather in this part of the county at that time, the crop was not large, no manure has been applied to this land since the spring of 1889.

As the committee saw this hay after it was well settled and satisfied themselves with the measure and quality, you can estimate the weight of the same.

Respectfully submitted,

ABEL STICKNEY.

This is to certify that I measured the land on which the above crop of hay grew, and it contained one acre and sixty-four rods.

W. K. COLBY.

REPORT ON THE TREADWELL FARM.

It was leased April 1st, for a term of three years with a privilege of five years to Mr. L. D. Stanwood, for $250 per annum, who occupies the farm as a home which has not been done before by tenants for many years.

The old farmhouse built in colonial times, has been shingled and with paint and paper inside presents a very comfortable and homelike appearance.

Mr. Stanwood has put the whole farm in neat and tidy condition, quite commendable to the committee in charge. He has stocked it with sixteen cows, one bull, four heifers, two horses, six hogs, sixty fowls and all necessary farm implements.

The crops the past season consist of thirty-five tons of hay, one acre of corn, fifty bushels potatoes, two bushels cranberries, sixty-five barrels of apples, with a sufficiency of garden vegetables. The principal sale from the farm has been of milk.

The experiments required by the committee have proved a failure from the fact of the potatoes that were planted not coming up on account of faulty seed. The committee are pleased with Mr. Stanwood as a tenant.

Respectfully submitted,

BENJAMIN P. WARE,
Chairman of Committee.

REPORT ON NEW MEMBERS.

The premium awarded to the person who obtains the largest number of new members from any town or city in the County, up to November 1st, is this year awarded to Morris N. Howe, of Lawrence, for thirty-three new members.

The total number of new members to Nov. 1, 1891, was eighty-two, including those who by receiving awards of seven dollars or upwards, became members under the rule

which deducts three dollars from such awards to non-members for membershp, which membership is for life, without assessments, and entitles the member to a voice and vote in the Society's business, and a copy of its annual publication of its transactions. The following places furnished the new members:

Andover 5,	Manchester 1,
Beverly 2,	Methuen 7,
Bradford 1,	Nahant 2,
Danvers 1,	North Andover 4,
Essex 1,	Rockport 3,
Georgetown 1,	Rowley 1,
Haverhill 3,	Salem 1,
Lawrence 46,	Salisbury 1,

Saugus 2.

REPORT OF THE DELEGATE OF THE STATE BOARD OF AGRICULTURE TO THAT BOARD OF HIS VISIT TO THE ESSEX SOCIETY'S FAIR IN 1890.

To the State Board of Agriculture.

GENTLEMEN:—The delegate regularly appointed to attend the fair of the Essex County society, Mr. Harwood, of Barre, being unable to attend, I was requested by the Secretary to substitute for him.

The Essex County Agricultural Society held its show this year in the town of Beverly, Sept. 23 and 24, and were favored with good weather both days. This society, as the Board knows, has no grounds, nor money invested in a plant for exhibition purposes. It is a travelling show, and by being such it avoids a large expense. I understand that not only is it out of debt, but has an endowment fund, which together with what it receives from the state, enables it to pay fairly good premiums, and to conduct the affairs each year without possible loss, whether the

weather be favorable or otherwise. In a county like Essex, with only one other agricultural society, in a remote corner of the county, I am inclined to think that this method is the best one. I certainly have never visited a fair where more personal interest was taken by the farmers in the exhibition than in this county. It was purely an old-time agricultural cattle-show, but I regret to say that while it is called a cattle show, it is in some respects a misnomer, for the cattle were not present in sufficient numbers to hardly warrant its classification under this head.

I understand that this is a milk county, and that many of the best herds are not exhibited because it would interfere with the milk business. Also that many of the large breeders object to taking their cattle to an exhibition where there is no shelter. I suggested that the society own a large tent, and why would not this be a good plan for all societies of the state that do not have covered buildings? If Barnum can exhibit his valuable animals all over the country, in all sorts of weather, in tents, there is no reason why owners of valuable cattle should not be willing to exhibit them at cattle shows, provided they are sheltered by a good tent or tents, and there is no out-door exhibition so attractive as that given under canvas. It seems to me that this society could own and transport a tent from place to place quite as cheaply as the wooden pens which they now employ.

As will be inferred, the show of cattle was meagre. There were some excellent working oxen, and an excellent herd from the Russell farm, but I did not see the grand cow "Eurotissima," owned by Mr. Daniel Appleton, that has beat in the record of the world. Mr. Russell's herd is a magnificent one, but it may almost be termed a professional herd, for it is exhibited at many shows, and is prepared for exhibition. I would like to have seen more amateur exhibitors, or rather more farmers present with their own stock.

The show of horses, especially of colts, was good; but the exhibitors were mostly "horsey" men. Why does the breeding of horses make a man a jockey, whether he be farmer or merchant, minister or layman.?

There was a very good show of swine, and an excellent display of poultry which was shown under a tent. There was one exhibition of perhaps one hundred fowls, made in the open ground, in a yard surrounded by wire fence, and this was the prettiest sight of all. Is it not possible, where the grounds are large enough, to display poultry in this way? There was but one pen of sheep exhibited, but they were good ones. It is said "that every dog has his day," the dogs are evidently having their day in Essex County.

The exhibit of fruit and vegetables was made in the Town hall, and in a tent just outside. The exhibit in these departments was full and satisfactory. I never saw finer vegetables nor better fruit for the season. Mr. Gregory made an exhibit of vegetables, or rather of types, which was exceedingly interesting. He gave one valuable suggestion to me, which I want to repeat and emphasize in this report, namely, that there should be standards fixed for the various kinds of vegetables and fruits, and that overgrown as well as undersized specimens should be ruled out; also that in the judging we should establish a scale of points, and that so many points should be given for size, so many for color and so many for texture, or any other qualities which it is desirable to take into consideration. I would add to his suggestion that the vegetables should be cooked, and their quality tested on the grounds.

There was an art department which was not unlike the art department of every other agricultural fair. I suppose that it is necessary for agricultural shows to have an art department. There were many works of art, especially in the needle department, that were beautiful and worthy of exhibition anywhere; but in the way of patchwork

bedquilts and pictures on the wall, there was a great deal that were better omitted. If we are to teach art through these agricultural societies, let it be good art. To award prizes for pictures which have not the slightest merit is misleading. It gives the exhibitor the idea that he has accomplished something, and encourages him to work in directions not suited to his talents. It is claimed that it is better for the heathen to remain ignorant than to carry anything but the true gospel to them. So it is better to not encourage art at all than to encourage that which is not art but a satire upon it. Would it not be well to send outside the limits of the society, and engage a committee to pass upon the merit of articles before they are admitted? That is to employ something similar to the "hanging committee" of the great art exhibitions, whose duty it is to pass upon paintings and other works of art to determine whether they possess sufficient merit to be admitted to the exhibition. Such a committee, composed of strangers, people of tact, could quietly say to those who sent in these so-called works of art, that they were not suitable for public exhibition, pointing out, if they pleased, the defects, and so practically become teachers of the many misguided and ignorant exhibitors. If such a committee had been on the grounds before the exhibition was opened, more than half the paintings and drawings and patchwork bedquilts which were exhibited in Beverly Town hall would have been withdrawn. Quantity does not make up a successful exhibition—quality does. It would be better to retain the half dollars and dollars given to such articles possessing no merit, and increase the prizes on those which do possess merit, and so encourage true art.

One grand feature of this exhibition is the annual address by some distinguished citizen of our county. The address this year was upon "Road-Making," and contained many valuable suggestions. It seemed like good old times when an audience of farmers, with their wives, to the

number of three or four hundred, assembled in the Baptist church to listen to good music by a quartette, and then for three-quarters of an hour to an address on road-making, which was of practical interest to the farmer. In modern cattle shows, so-called, there would have been a horse trot on the programme, against which the lecturer would have had to compete and who is equal to that?

This society is doing admirable work in the way of experiment, upon farms throughout the county, and much attention is given to the work. Closing, I may call the society a model one in many respects, but it is so situated that it should lead in the work of agricultural exhibitions. That it does lead in many departments, I believe is true. That it might lead in all departments I believe is possible.

Yours truly,

W. H. Bowker.

FARMERS' INSTITUTES.

The Society held seven Institutes during the season of 1890-91 on as many different days, forenoon and afternoon, at which the following subjects were opened by carefully prepared essays, and freely discussed by any and all persons present who cared to discuss them, viz.—

1. "Would Agriculture and the success of this society be better promoted by a permanent location of its Fairs?"
2. "The new South."
3. "Fertilizers."
4. "Description of the Natural Bridge of Virginia;" "The Cave of Luray" and "Lookout Mountain."
5. "How can Farmers dispose of their milk to the best advantage?"
6. "Taxation."
7. "Is it for the interest of the Farmers of Essex County to develop the Farm Horse or the Roadster and Driving Horse?"

8. "Have the alleged causes of Agricultural Depression a sound foundation?"

9. "A Plea for the Forests" and "Woman's work in the Grange."

10. "Home life on the Island of Capri" and "Wild and Native Flowers."

11. "Fertilizers or Plant food."

12. "Food rations for Farm stock."

13. "How can Farmers increase their Profits?"

14. "Poultry."

All of these discussions were reported quite fully in the "Essex County Mercury" and a copy mailed to each member of the society in the county.

The first Institute of the season and the 73rd of the course was held at the Town Hall, Peabody, Friday, Jan. 2nd, 1891, President Ware presiding, the subject being "Would Agriculture and the success of this society be better promoted by a permanent location of its Fairs?" Owing to the very inclement state of the weather, it being rainy and bad travelling, the attendance was correspondingly small. Mr. Nathan A. Bushby, of Peabody, opened the discussion by stating in a clear and forcible manner his reasons why he thought it better for the society, and better for the public. In the first place he did not want it for the sake of a Trotting course, but did believe the society needed some place where horses and colts could be shown to the committees and the public, either in harness or by halter, for the general good of everybody. He favored a permanent location because of the great trouble in moving from place to place, a work lasting three or four weeks to get the pens and other paraphernalia moved and set up again, ready for a Fair, and he thought the time had arrived to do it because the old pens were about worn out and the society would have to have new ones soon. Again with permanent grounds and buildings the various parts of the show could all be brought together, whereas they are now often widely sep-

arated. In all of the cities and larger towns in the county, it is difficult if not impossible to find land for the display of live stock and ploughing, without going a long distance from the exhibition hall and buildings in connection with other parts of the fair. When the society was organized, it was easier to move the show than the people, now with all of our railroad facilities it is easier to move the people than the show. A central point in the county, easy of access is what is wanted, and Danvers is such a place. The society's farm at Topsfield is geographically more central but is not easy of access by steam and horse cars. It may be said that other societies having a permanent location are in debt, but they started in debt, whereas this society has money enough on hand to start with. Some of the old pens have been in existence forty years and the exhibition of horned cattle grows less every year, because the stock is not sheltered from the bad weather that is likely to occur, and by having a permanent location this objection could be overcome.

Mr. Butler, of Georgetown, followed Mr. Bushby in much the same line of argument, but he did not wish it understood that he thought the society a failure under the present system, for it was not. He himself was not in favor of horse trotting (as the common acceptance of the term implies), but there are $400,000 invested in horse stock farms in Essex county, and their owners are entitled to due consideration. He was in favor of a permanent location for the convenience of exhibitors in all departments of the fair, and probable increase in the quantity and quality of all exhibits. With a permanent location we could have ample hall accommodations which now are oftentimes deficient and the fair could be continued to three or four days to the benefit of the society.

At this time a letter was read from Mr. F. H. Appleton, who was unable to be present, and he was strongly opposed to a permanent location. He cited other societies with permanent locations and said it only meant a local

organization within a short time, with local interests, rather than general. The letter also suggested canvas covering for the pens.

Mr. C. C. Blunt, of Andover, opposed permanent location, but advocated tents to protect the stock. He said the society was in the first rank of agricultural societies and hoped it would remain so.

Mr. Andrews, of Essex, and Mr. Emerson, of Haverhill, answered some of the reasons alleged, why the location should be permanent, very ably. Mr. Emerson said stock must be moved the same with a permanent location as now, and tents, buildings and pens will rot there the same as now and wear out.

President Ware took the floor and made able remarks against a permanent location. He said he thought a permanent location meant a horse trot and nothing else. He believed a horse trot had no more to do with agriculture than a circus had. The Essex society offers much larger premiums to exhibitors than other societies, and has ten times the invested funds of any of them (except the Amesbury and Salisbury) and six times as much as they have.

In the afternoon Vice President O. S. Butler, presided and introduced President Ware, who gave an account of his recent travels through the South. Before the war, the entire energy of the planters was devoted to raising cotton, while meat, provisions and about everything was imported from the North and West, and in some few sections it is much the same to-day. In some localities watermelons, potatoes and other vegetables are raised and sent north at a good profit.

A more shiftless, lazy and wasteful method of agriculture the speaker never saw than on some of these cotton plantations. Neither hay, corn, nor vegetables are raised for home sustenance but are purchased instead, and all the work put into the cotton crop. It is a very common custom for the farmer to mortgage his crop to the storekeeper in advance to get supplies on credit, and when the crop is har-

vested it all goes to the storekeeper, and the farmer is a little in debt beside.

In time he mortgages his farm and eventually the storekeeper gains possession and some of them become owners of immense tracts of land in this way.

Before the war it was much the same way, but when the farmer got in debt, he would sell a slave to save further indebtedness and save the farm. The usual crop of cotton to the acre is about half a bale or 250 pounds; from three to five dollars worth of fertilizer is applied to the acre, and a slack process of ploughing and hoeing gone through with. By doubling the amount of fertilizer per acre they could more than double their crop.

The cotton grows ordinarily about eighteen or twenty inches in height, but with more fertilizer and better culture would grow to three or four feet. The houses of many of the farmers are mere hovels of logs with the chincks plastered with mud.

A revolution is destined to be worked in the use of fertilizer for cotton through the utilization of steel slag and crushed cotton seed. The slag is rich in phosphoric acid and is ground to a fine meal for use, while the cotton seed hulls contain a very powerful concentrated potash. Cotton seed was formerly a waste but an oil is now obtained from it that easily passes for olive oil and is also used for the adulteration of lard, while the pressed and ground hulls yield us our cotton seed meal. The soil is of great fertility. The speaker had seen one hundred bushels of shelled corn raised to the acre in one place, though ten to twenty bushels is more often the crop. The speaker met one man that owned a nursery in Georgia and the growths of some of the stocks were remarkable. The growth of one year from the bud of a pear was eight feet in height and one inch in diameter; enormous fruit and hay crops can be raised, and the price of milk is double what it is here. The outlook for southern agriculture is good, and the local market is rapidly extending.

Iron, coal, clay, marble, granite and other natural products abound in the mountains and of good quality. The whole New South is in a state of boom. The speaker describes several other matters of interest, one of which was the way the people of Atlanta obtained their supply of water, an artesian well driven over 2000 feet with a six inch bore in the heart of the city. The water rises to within a few feet of the surface and is distributed over the city in pipes with hydrants at intervals in the streets, but is never put into the houses or other buildings. A simple pressure of a lever draws the water, which is raised from the well by pumping.

The 74th Institute was held at Parker Hall, Newbury, Friday, January 16th, 1891. In the forenoon the subject for discussion was "Fertilizers," opened by James J. H. Gregory, of Marblehead.

The speaker in general gives a preference to fertilizers over manures. Phosphates, said he, is a general term incorrectly used to commercial fertilizers. They can generally be purchased cheaper by the farmer in the form of wastes, than of the manufacturer all prepared. Thus fish waste, which is very rich in nitrogen, can be purchased for $3.50 per ton. The waste of slaughtering establishments is rich in phosphoric acid and nitrogen, and is also very cheap. Ashes contain the important items of potash and phosphoric acid, which with nitrogen, form the great elements of plant life, so that when using ashes as a fertilizer some other material should be used to supply the nitrogen.

An excellent way of utilizing fertilizers he found to be by laying successive layers, each two inches deep, of good soil, ground bone, and unleached ashes. This mass he let heat for two weeks, and then broke up and applied to the land. By adding nitrate of soda to this we have one of the richest fertilizers made.

He had tried different kinds of machines for distributing fertilizers, but had found but one that would fill the bill, and this did not suit him for all kinds of crops. Mr. Greg-

ory emphasized the need of special fertilizers for different crops. Thus wheat does best with nitrate of soda-nitrogen. It is also especially good for asparagus. In like manner sulphate of ammonia is beneficial to spinach. Nitrate of soda will do wonders with tomatoes, though there must be a fair share of potash and phosphoric acid to get these results.

Fertilizers should be ground very fine to get the best immediate results. Barnyard manures, on the other hand, are not plant food, but they contain the elements of plant food and have to await disintegration in the soil before they can be utilized by the plant. The effects of barnyard manures have been traced in the soil by chemists twenty years after application, though of course their real practical value is gone long before that time. In using fertilizers the nitrogen disappears the first year. In applying to drill the fertilizer should be dry. By favoring the use of fertilizers he did not wish himself to be understood as opposing the use of barnyard manures. He uses large quantities of it on his farm at Middleton, because he can buy it comparatively cheap, and transportation to his farm is easy by rail. But if anyone asked him if barnyard manure was as cheap at a gross cost of $7.00 a cord as $7.00 worth of fertilizer, he would answer no. By the use of fertilizers he had grown cabbages three years in succession on the same land. Another advantage of fertilizers is they can be applied to growing crops at any stage of the crop. The advantage of using barnyard manures is that they add humus (black earth) to the soil, which holds the fertilizing elements and aids in the mechanical effects on the soil.

The same result can be obtained by planting grains or clover in the fall and ploughing it under in the spring. Growing clover produces about 178 pounds of nitrogen per acre, which it takes from the air. This is equal to the nitrogen in seven cords of stable manure. In answer to a question whether "fire fanging" (baking and heating) injured manure, Mr. Gregory replied that it did by liberating

the ammonia, though this could be replaced by adding fish waste.

Mr. George A. Tapley, of Revere, believed in stable manure. He got all he wanted for $2.00 per cord, and it acted promptly on the plants with good results.

Mr. T. C. Thurlow, of West Newbury, believed in stable manure, but it cost him $8.00 per cord on his farm, and the high cost compelled him to use fertilizers. He had used a mixture of 1000 pounds of ground bone, 500 pounds of muriate of potash, and 200 pounds of nitrate of soda, with excellent results.

Mr. Charles W. Woods, of Newbury, expressed himself as in favor of fertilizers as compared with the high cost of stable manure.

At the afternoon meeting Mr. Gregory presided, and President Ware gave an address, the subject being, "Lookout Mountain, The Natural Bridge and Luray Cave."

From Lookout Mountain Mr. Ware said, on a clear day, one can see over an area of 500 miles, and parts of seven different states. There are two railroads up the mountain —one a cable road—and a spacious hotel, with pure air, pure water, gas, etc., when you get there. He referred briefly to the battle of Lookout Mountain, to Missionary Ridge, and several other noted and interesting places. The mountain, on three sides, is of precipitous overhanging rock. There is a locality (which has been given the title "Garden of the Gods") on the mountain, remarkable for its curious rock formations, resembling various animate and inanimate objects, which the speaker dwelt upon at length. He next spoke about the Natural Bridge, of Virginia. The rock is of hard blue limestone, that forms the bridge, connecting the opposite banks of a ravine. The width beneath the arch varies from 60 to 90 feet. The height from the bed of the ravine to the underside of arch is 165 feet, and the depth of the rock and earth composing the bridge 40 feet. The speaker described in detail the attractions of the place. The territory about here—some 3000 acres was granted to

Thomas Jefferson, by King George III, in 1774, but now it is largely owned by Essex County capitalists, who are developing the property. The town of Luray where the Luray Caverns are, is on the boom like a good many other southern towns. The land was sold by order of the court, and the discoverers of the cave bought it for what was considered a good price, but it has increased fabulously in price since.

The cave has been made easy for travel with cement floors, bridges, etc. It is full of stalactites and stalagmites, some of which bear most striking resemblance to fish, vegetables, organ-pipes, etc. It is well lighted by electric lights, but each visitor also carries a candle. The color of the formations is generally a dark, dirty brown, very few being white. One can walk three-fourths of a mile in the cave without retracing his steps, and the temperature rarely varies from about fifty-four degrees the year through.

The speaking which followed took a wide field of natural phenomena. Mr. Gregory compared the bend in the Tennessee river, as seen from Lookout mountain, to that in the Connecticut, as seen from Mt. Holyoke, which, in his opinion, was the most beautiful of any view in New England. Mr. Nathaniel Dole, of Newbury, gave a description of the Mammoth Cave of Kentucky and the surroundings. Several others spoke of and described various noted places and freaks of nature that had come under their observation until time to adjourn.

The 75th Institute was held at Town Hall, Georgetown, Friday, Jan. 30, 1891. The subject for discussion in the forenoon was, "How can farmers dispose of their milk to the best advantage?" opened by Mr. Willard F. Kinsman, of Ipswich, who said there are three prime essentials requisite to the advantageous or profitable disposal of our milk. (1) Good cows, (2) an abundant and economical food supply, and (3) a price above the cost of production.

Mr. Kinsman quoted from the "Country Gentlemen," Col. F. D. Curtis, as saying that the farmers and dairymen, in New York state, are carrying 1,000,000 unprofit-

able cows. Now the total number of cows put down for New York is 1,552,373, which would show that only one-third of the cows kept in that state pay for more than their keeping. In the thirty-five towns in Essex county, with an estimate of 30,000 cows, according to the same ratio, 7,000 should be weeded out. How to find them out and how to get rid of them is the question for the farmer. Good judgment is needed for this. A cow whose milk may be profitable for butter making, may be unprofitable when her milk is sold. Decide for what purpose you want the cow first. If a cow's milk production falls short of 2000 quarts a year get rid of her. A cow producing 2500 quarts of milk a year the speaker considered a good one. If that is sold to a middleman at three and one-half cents a quart the income will be $87.50, admitting the cost of grain (at the present high prices) to be the same amount. The farmer has the manure for profit and it will pay to keep the animal.

On the other hand if the milk is produced for butter making, suppose the animal does not exceed 2000 quarts, test her milk in a Cooley creamer by itself. Should her milk show a space of cream for every quart, even though she gives only six or seven quarts a day, she pays for keeping and her butter production will be a pound a day. Figure the profits of this cow; from 2000 quarts 2000 spaces of cream, averaging three and one-half to four and one-half cents a space; taking the lowest price the income from cream alone would be $70, and in addition there are left 1400 quarts of skim milk on the farm for feeding purposes, worth one cent a quart, and often selling as high as three cents. This brings the total income from the cow up to eighty-four dollars. The question is asked, where are our good cows to come from? and the speaker answered, raise them. Some farmers will move heaven and earth to sell their skim milk at one cent a quart, when there are various kinds of young stock on the farm actually suffering for it, and to which it may be fed at a profit.

Dealing with the third point of his essay the speaker

considered the price of the milk. When a farmer is so situated that he can sell directly to the consumer at five or six cents a quart, he, no doubt, sells at a profit; but the rest must sell to the middleman or the co-operative creamery. The middleman, as all know to their sorrow, has often proved a rope of sand, but the co-operative creamery, he believed to be the remedy for surplus milk every time. Of good cream and fine butter there will probably never be an over supply, and co-operative dairying in New England is only in its infancy. He believes in making butter by this method and feeding the skim milk to calves, colts and poultry, and it will pay. Mr. Butler, of Georgetown, asked for facts concerning the Ipswich creamery, in which Mr. Kinsman was interested. In reply, the speaker said, some had raised cream and sold to the creamery, and done very well out of it, while others said it would bring them to the almshouse if they sold it that way long enough. But to make a success from butter a man wants butter cows, his cows will average a pound of butter from six spaces of cream. As a rule he finds six and one-half spaces of cream make a pound of butter, but by feeding less grain it takes seven. The Ipswich creamery has been very successful in its operations by having good cows adapted to butter, rather than to the large flow of milk, and had paid dividends of four per cent. to its stockholders. A general discussion followed, and the general sentiment was that when farmers are so situated that they cannot sell their milk direct to the consumer, the system of co-operative creameries was the best way for them to get the most from their milk.

The subject for the afternoon was "Unequal Taxation," the speaker being George A. Tapley, Esq., of Revere, who had evidently given the subject a good deal of thought and careful study. He spoke of the universal interest of land owners in the subject, of its agitation in the legislature and elsewhere. He said all legislation seemed to be in favor of the lender and against the borrower of money. It is time for farmers to unite and organize for a change. In 1885

there were 45,010 farmers in this state, and four times that number of small house holders; if all work in concert they may accomplish the object sought. The man who does not pay his full share of taxes cheats his neighbor who does. One-half the buildings in the state are mortgaged, and the lender pays no tax on his mortgaged notes, but the mortgaged property does pay a tax, and because the mortgage note is untaxed, the borrower really pays the tax on that too. Assessors are now required, by law, to have sworn statements of property, but as there is no penalty attached, he fails to do it.

Mr. Tapley here read the Vermont tax law passed by farmers. Our own state provides that any one who thinks himself overtaxed may apply to the County Commissioners, but this is uncertain and unsatisfactory. In Boston, according to the best authority, $100,000,000 of property is exempt from taxation. He said the tax rate in the state could probably be reduced one-half if all property was taxed. Mr. Amos Hasletine, Jr., of Haverhill, followed Mr. Tapley, and said it was not too strong a statement to say that one-third of the taxable property in the state is untaxed. The legislative act to prevent what is called "double taxation," is an injustice, and works directly against the man who mortgages his property, and in favor of the man holding the note. The state tax is about eleven and one-half mills on one hundred dollars, and the county tax not over one mill more, and the savings bank property, exempted, would pay the state and county tax if it were taxed. The tendency is to put all taxes on real estate. The trouble is the farmers are overthrown by the manufacturing interests. Mr. Ayer, of Methuen, ridiculed double taxation; he said there neither is nor has been double taxation; all there was to it mortgage notes were exempt and they should be taxed. In addition to that the farmer, whose property is all in sight and taxed, bears the burden of invisible property which escapes taxation. He cited and condemned a certain association, in

Boston, which sought to tax real estate only. Farmers are competent to make laws as shown in Vermont; let them do so here.

President Ware spoke of the efforts the grange made last year in the interest of more equal taxation, but it tried to do too much and did not succeed. What we need is a law to tax all personal property.

Mr. Little, of Amesbury, was in sympathy with the previous speakers and went back to the first principles of government, which made taxation a necessity for the public good. He believed in taxing all property whatsoever, and then rebate what was deemed advisable.

The 76th Institute was held at Ipswich, Friday, Feb. 13, 1891. The subject for discussion in the forenoon was, "Is it for the interest of the farmers of Essex County to develop the farm horse, or the roadster and driving horse?" President Ware being absent in the morning, Vice President Butler presided, and being appointed to open the subject with an essay, he was obliged to do double duty.

The breeding of horses, said the speaker, is profitable, like any other business, if you succeed, and success is always profitable. Success depends more upon the man and his conditions than upon the business. The conditions of success depend, first upon the farm and its location, second upon a clear conception of what you intend to raise, third upon the selection of stock, fourth upon the development of the colt in a proper manner, and fifth upon the early and proper training of the colt. In regard to the first condition the farm should have good pasturage for summer, and good grass land to provide winter fodder. The farm should be far enough from the city to make the price of land reasonable. In choosing the kind of horses you will breed consider the market you are to supply. Having determined the kind of a horse to breed, select the best strains, particularly for the sire, which transmits his form, color and temper. For a driving horse he recommended the Black Hawk

strain of the Morgan, crossed with the Clyde, Percheron or French coach horse. If more speed is wanted cross the Black Hawk with a thoroughbred.

Develop your colt rapidly and evenly, but not forcibly; feed generously, but not over feed. Commence early to develop the habits and character of the colt; teach him that he is completely in your power, but that you are his best friend. Teach him the use of the bit young, but be careful when you put the bit in his mouth, never twitch or jerk the bit as it will make him hard mouthed. Teach him the use of reins, and in doing so use a few simple words with a meaning, always using the same words for the same thing. Then teach the colt to stand still in all places and under all circumstances, and not have him go, no matter how much he wants to, until you give him the word, and make him feel that he is under the entire control of his master. The speaker touched briefly upon shoeing, stabling, feed, and remedies for various diseases. Coming back to the profit, he considered the value of such a horse as he had described to be in excess of the cost of raising, which would probably be $300 to $350. The satisfaction of having such a horse is a pleasure not only to yourself but to your family.

Others spoke of the intelligence of the horse and thought there was a good field for success in raising the right kind of horses. Fine horses are raised in Maine, and why not raise them in Massachusetts. Some people think there is a stigma on a man that tries to raise a trotting horse, and very unjustly too, for it takes a man of brains to raise trotting horses and do it successfully.

At the afternoon session, Mr. George W. Russell, of West Newbury, read a paper on the subject, "Have the alleged causes of Agricultural depression a sound foundation? if so what are the real causes of such depression."

In opening Mr. Russell said that the gathering before him did not show much evidence that farming does not pay. We in New England do not know much about agricultural depression, but their complaint of such depression, and

the alleged causes for it are: First, insufficient quantity of money; second, protective tariffs; third, trusts; fourth, speculation in farm products; fifth, inequality in taxation; sixth, too high rates of transportation.

In regard to the insufficient quantity of money, the actual circulation in this country Jan. 1, was $1,529,000,000, or $29 per capita. In Great Britain the circulation per capita was $29.01; in France, $57.36, and in Germany, $20.63, so that this country stands about even with Great Britain, and second only to France in this respect. The free coinage of silver would quickly retire all the gold, and gold certificates from circulation, really contract the currency and make it harder to get money on any kind of security than now. Any student of the condition of agriculture knows that protective tariffs are necessary for agricultural prosperity. No country, past or present, has a paying system of agriculture that does not or has not protected its home industries.

If we protect our labor, trusts or syndicates will be a benefit to the masses and will give us cheap production and distribution. So far as speculation in farm products is concerned, there is no more than there is in other things, though if the producer could deal more directly with the consumer it would be advantageous.

Transportation is as low as it can be at present and pay fair wages to labor and capital employed, though improved methods may bring down rates as rapidly as in the past.

The cost to the people of our railway services for freight and passengers is just one-third the cost of the same service in England, and English companies pay their employees less than one-half what ours pay. So much for the alleged causes of agricultural depression.

Now for the real causes, which the speaker enumerated as first, a greater increase in agricultural products than in population; second, the vast increase in the production of cereals in other countries, and third the employment of people to do our manufacturing and produce our wool and

sugar whom we do not feed. These several points Mr. Russell considered at some length. While in the thirty-nine years ending in 1889, the population has increased 175 per cent.; farms have increased 260 per cent.; cattle, 185 per cent.; swine, 66 per cent.; cotton, 201 per cent.; corn, 257 per cent.; wheat, 389 per cent. and oats, 411 per cent. In addition to this the production of cereals has enormously increased in Russia, India, Canada, and South America, where the soil is richest and the wages of laborers lowest. The black lands of Russia alone could feed the entire world if sufficient transportation were provided. We cannot compete in other markets except at the cost of American labor. In 1889 we imported more than 300,000,000 in agricultural products, but that of course displaced so much of American.

The other great cause of agricultural depression is the employment of foreigners to do our manufacturing, whom we do not feed. We imported last year more than $600,000,000 worth of goods that we might better have produced ourselves. This means that we employed more than 2,000,000 people that we did not feed. It would be safe to say that if we produced all the goods that we now import, our present production of meat and cereals would not feed our population.

The 77th Institute was held at the Town Hall, Bradford, Friday, February 27. The driving snow storm in the morning made it look very doubtful about there being many in attendance, and as it was "Woman's" day (for President Ware said that "woman" signified far more than lady), and as one subject was "The all around woman" perhaps he was right. But before noon the sun burst forth and there was a goodly number present.

Mrs. Martha De M. Gage opened the meeting by reading an essay, and the subject she selected "A Plea for the Forests" indicated that she had given the subject careful consideration. She spoke first of the trees and groves in history, romance and poetry, commencing with the famous

cedars of Lebanon, proceeding to a more practical view of the subject. The essayist said that there is a greater variety of trees in this country than any other, for it includes all those of the temperate and many of the torrid zones. She quoted official reports on forestry to show that the cutting off of forests tended to produce droughts and freshets. The leaves and debris that fall from the trees in forests retain the water and feed it out gradually to the ground, giving rivers and brooks more steady supply through the year but when the forests are swept away the rainfall or melting snow and ice swell the rivers with a sudden rush and none is held in reserve.

The cutting off of forests in New York state, Ohio, and other western states is bringing about this result with the large rivers. Ohio was a great fruit state and noted as such, but the cutting away of the forests has almost destroyed the industry. The essayist referred to early colonial laws to prevent the needless and unauthorized destruction of forests.

Mrs. Harriet L. Bailey, of West Newbury, followed Mrs. Gage with an essay on "Woman's work in the Grange." Mrs. Bailey spoke of the valuable help that woman renders man in various organizations, among other things her work in the Woman's Relief Corps of the Grand Army. In the Grange her membership raises the moral and intellectual standard. It is in her province to make the meetings more interesting and thus draw the attendance of the young men who might otherwise be tempted to frequent questionable resorts.

The farmers' calling was once not looked upon as desirable by young women, the clerk in the store with his social advantages was far preferable. This is now changed. Agriculture as a profession is rising in the general estimation. No one has better opportunity to secure education than the modern farmer. According to the last report the state granges numbered 8,964 members, and the increase in 1890 was 1,364. In the literary line, women can do much

to aid the grange. In all granges she holds four of the offices, and in some six, and the general comment is she does her work in those offices as well or better than men.

Mrs. Fred H. Bishop, of the Massachusetts Ploughman, read the next paper and her subject was "The all around woman." Mrs. Bishop evidently considered the "all around woman" as one healthy and well developed physically and mentally, capable of following a profession if need be, of participating in public affairs, of marrying wisely, or in case she does not marry, of following a happy and useful life in some profession or calling. The true man and the true woman like the same thing, but like them differently. The ideal woman is a reality to-day and is becoming more so. She will choose her own course in life. Many choose single lives for lofty reasons, that some of her married sisters do not comprehend. But should she decide on the "highest relation" let her look carefully as to whether she will chain herself to a block or a helper; if she is free from hereditary taint, and healthy, she will decide that she wants to marry. In closing Mrs. Bishop spoke of the advance women are making. A century ago there were no girls in the public schools, now they are not only admitted in schools but in colleges on equal terms with boys and in many callings and professions in life, women are on an equal with men.

The last paper of the forenoon was read by Miss Lizzie Huntington, of Amesbury, whose subject was, "What the farmer has done and may do to make home attractive." The ideal home, said the essayist, must be in the country, and the tendency of the times is to devote more time and money to the aesthetics of the home. The old times when home ornamentation was not considered, have passed away with the people who lived in those days, and here the essayist drew a mental picture of the oldtime farmhouse kitchen with the mantle on which rested two or three brass candlesticks, a row of flatirons, tobacco, pipes, and perhaps a pitcher of cider, and from this she gradually presented the

other extreme of modern times, of over adornment where the house is so packed with fancy ornamentation that the visitor is uncertain how he shall move about.

The woman's sphere is her home, but she need not think of giving up her interest or participation in outside affairs on that account. The essayist believed in open windows, pure air, plenty of sunshine, instead of close musty parlors. Improve yourselves as well as your homes, do not neglect to set out shade and fruit trees, take care of the lawn and flower garden, and do not forget the vegetable garden. None need an education more than the farmer, and in this direction the grange is a powerful agent, while it is next to the church in its influence for good. The memory of a beautiful and happy home is the richest legacy children can inherit.

The afternoon session was opened by the reading of an essay on "Home life on the Island of Capri," by Mrs. Margaret B. Wright of Cambridge. A small island of some 4,000 inhabitants and three and one-half miles long by two wide in its greatest length and breadth. The island rises abruptly from the water like a peak of a submerged mountain, the cliffs on one side rising sheerly up 900 feet from the water. With its 4,000 inhabitants, it has three villages, one of which is a little fishing hamlet.

Until the government road was built, Anacapri (one of the villages) could be reached only by means of 535 enormous steps, very steep and high, being gouged out from the face of the precipitous rock straight up from the sea. Donkeys were trained to go up and down these steps, heavily laden, and so did women themselves, creatures of burden, with stone crates of fruit and casks of wine on their head. At first sight Capri seems to be an Amazonian Isle with almost no men at all, and those few lounging about doing nothing. But this is explained when it is learned that the men are off coral fishing. The products of the island are oranges, lemons, grapes, figs, olives, fish, quails and wine. Quails are captured in immense numbers during their mi-

gration. Ploughing, spinning, and the manufacture of oil are conducted now just the same as they were two thousand years ago, and their lamps or rather lights, for they use cotton rags dipped in liquid grease, and equally primitive stoves. The process of wine making is precisely the same as it was in Bible times, the grapes being all trodden.

Among many other characteristics of the Islanders, Mrs. Wright mentioned the general absence of drunkenness, the natural inclination to dancing and music, and the wonderfully sweet music the women will extract from jewsharps.

Mrs. Charlotte N. S. Horner of Georgetown read a paper on " Wild Flowers and Native Trees " of which she has been a close student, and which was very interesting and instructive. Mrs. Horner commenced with a history of the early colonial interest in trees and wild flowers.

Even before the coming of the white man the Indians had commenced their work of reclaiming, and to them we are indebted for corn, squashes, melons, beans, and tobacco. The planting of fruit gardens and orchards, followed close upon the coming of the Pilgrims and Puritans, and were the rule in the border towns and islands of Massachusetts Bay.

Gov. Endicott planted his immediately after his arrival in 1620. The planting of shade and ornamental trees early received the thought of our ancestors, as is witnessed by the noble specimens about the old homesteads ; and in this connection especial mention is made of the Pearson elm in Newbury, the Hale elm in Boxford and many other ancient trees that are or were renowned for their size and age.

Allusion was also made to the gardens of our great grandmothers, with their pinks, peonies, marigolds and hollyhocks, mingling with the medicinal herbs ; such as wormwood, spikyard, hoarhound, etc., traces of which may still be occasionally seen in some fence corner or clump of rose bushes, or lilacs, where they have bloomed for a hundred years. Mrs. Horner here gave a long list of wild

flowers which she had transplanted to our gardens with success. Nearly all our county trees are suitable for shade or ornament, but intelligent thought is necessary in selection and location. For instance trees with roots running near the surface of the ground like the elm, white maple and beech, although among the most beautiful of our shade trees, should not occupy roadsides bordering upon gardens. The hickory is a good shade tree if found growing in the right place, but rarely stands transplanting; but the favorite ornamental tree is very plainly the rock maple.

Preceding and interspersing the exercises through the day, there was very acceptably and finely rendered violin music by Miss Ladd, singing by Miss Kate Knight, and organ accompaniments by Mrs. Bates, all of Bradford.

A vote of thanks was here passed to all the ladies who had read the papers of the day, and also to those who had furnished the music, followed by about half an hour's discussion upon the various topics by the gentlemen present who had listened attentively all day to the ladies.

The 78th Institute was held at Town Hall, Wenham, Friday, March 13, 1891, and although it was very rainy, and very bad travelling, there was a good attendance. Prof. George H. Whitcher, of the New Hampshire experimental station was the speaker forenoon and afternoon. The subject for the forenoon was "Plant Food."

In opening the speaker expressed his appreciation of the attendance on such a day, as one that showed the enthusiasm and interest in farming in this county.

He should consider the subject from a scientific standpoint, but showing the practical operation of scientific principles. In the first place he considered the chemistry of the crop itself, and proceeded to find out from the elementary parts of the crop what elements are required to produce it.

To illustrate this he gave the results of the analysis of a stalk of corn weighing about five pounds. About eighty per cent. of this stalk (which was immature) was water, a very considerable proportion of the remainder was starch, a

much smaller proportion sugar, a small quantity of oil, albumenoids and ash. The exact proportion of these different elements was exhibited in bottles, thus giving the audience a clear idea of the relative parts. Now all these substances are obtained from the soil or atmosphere, and it is important to know where each came from. Starch, sugar and oil are composed of carbon, hydrogen and oxygen, these three elements combining in different proportions in each of the substances named.

The remaining solid from the corn—the albumenoids—is also composed of carbon, hydrogen and oxygen, to which is added fifteen per cent. of nitrogen. The oxygen and hydrogen are drawn directly from the soil in the form of water, but primarily the water is furnished by the atmosphere ; the carbon also comes from the atmosphere in the form of carbolic acid gas ; the source of the nitrogen is not known, but the speaker believed that, with few exceptions, it comes from the air. This would leave the ash alone to be supplied by the soil.

Applying the analysis of the five pound stalk of corn to twenty tons (the crop of an acre) gives about the following component parts of the entire crop : 32,580 lbs. of water, 2,400 lbs. of sugar, 1,394 lbs. of starch, 895 lbs. of fibre, 237 lbs. of fat, 756 lbs. of albumenoids and 408 lbs of ash. Now the ash alone is supplied by the soil, while all the other parts come from the air, and the question arises, "Must we put back on the soil all of the ash taken by this crop ?" and the speaker replied in the negative. Of the 408 lbs. of ash in the crop, 150 lbs. are silica (of which there is plenty in the soil), 17 lbs. of magnesium (which does not require replenishing), 17 of soda (which is not necessary to the plant), 44 lbs. of phosphoric acid, 120 lbs. of potash and 120 lbs. of nitrogen, the last three (284 lbs.) being the only essentials of the ash, or of the whole plant product, that it is necessary to put back into the soil.

Here then are the necessary bases of manures and fertilizers, viz : nitrogen, phosphoric acid and potash.

Barnyard manure is, and must continue to be, the great standard supply of fertilizer, but we are apt to mistake bulk for value. For instance a ton or 2000 lbs. of barnyard manure has only about twenty-four pounds of actual plant food. Phosphoric acid, potash and nitrogen combined will make a perfect fertilizer, and here the speaker urged the farmers to buying the three parts of fertilizer and mix them at home.

To show the value of the different elements entering into the chemical fertilizers and their compounds, Prof. Whitcher cited a series of experiments in raising corn in New Hampshire, the result being shown in the value of the crop per acre. Without fertilizer of any kind, $70; with potash alone, $94.70; phosphoric acid alone, $73.76; phosphoric acid and potash, $111; phosphoric acid and nitrogen, $56.99; nitrogen, phosphoric acid and potash, $104; prepared fertilizer, $95.67; complete chemicals, $108.58; potash and nitrogen without the acid, $101.79; and ashes alone, $107.94. The best results all over the state were with complete fertilizers, in which nine parts were phosphoric acid, eleven of potash, and three of nitrogen. In answering a request Prof. Whitcher gave the following formula for mixing chemicals for a crop of corn: 325 lbs. dissolved bone-black, 70 lbs. sulphate of ammonia, 100 lbs. muriate of potash. This gives a preparation of 500 lbs. for an acre at a cost of $10.

For a potato crop he recommended 360 lbs. of bone-black, 140 lbs. muriate of potash, omitting the ammonia, at a cost of $8. There is no danger in mixing the chemicals, and it is easily done on the barn floor.

In reply to a question Prof. Whitcher said that he considered $1.00 invested in prepared fertilizer would raise corn to the value of $1.50, and $1.00 in chemical fertilizer to the value of $2.50. There is no danger in using as high as ten per cent. of potash in the fertilizer, but each one should find out how much his land required and apply accordingly.

The afternoon subject, "Animal Foods," was like that

of the morning, treated by Prof. Whitcher from a scientific standpoint. The question is what rations will give the best results with animals, and experimenting in this line is still young yet.

The subject may be divided into three parts: "What is the food for?" "How much should be fed?" and "What kind should be fed?" Every substance fed to animals contains starch, sugar, oil, albumenoids and other substances, but in different proportions. Now we feed to sustain life, and to do that it is necessary first, to produce heat; second, to produce force or energy; and third, to produce growth or increase the live weight.

The temperature of the animal body must remain the same the year round, no matter whether the atmosphere is zero or ninety, and this heat is maintained by food, the same as coal in a boiler. In the second place we feed force and energy, and it is estimated that a working ox consumes three times as much as one standing still in the barn. And third we feed to increase the live weight, or growth, whether fat, wool, muscle or whatever is desired, and different foods are adapted to these various needs.

Milk contains about eighty-seven parts water, thirteen parts solids, and this latter substance contains nitrogen, the muscular parts of the animal, the wool of the sheep, etc., from the albumenoids of the food. Mr. Whitcher devoted himself principally to the feeding of milch cows, and gave as an excellent ration for a cow weighing 1000 pounds, for one day's feed, twenty pounds hay, five pounds of corn fodder or oat straw, three pounds of corn meal, three pounds gluten and three pounds of middlings. If ensilage were used in place of hay, he would give forty-four pounds a day. Ensilage mixed with coarse fodder makes a good ration, and oat straw is as good as English hay when mixed with ensilage. Clover mixed with hay makes a good ration for butter; but altogether too much starchy food, principally corn meal, is fed to milch cows. It would be better if farmers used no more corn meal than what they raised here

in New England. Either cotton seed meal, gluten or middlings would make a good substitute.

In answer to questions Prof. Whitcher said that the change of feed does not affect the quality of the milk, though it does the quantity. A possible exception to this rule may be found in the case of swill fed cows near the city, but even here the speaker was in doubt. If the feed changes the quality of the milk the cow is not in her normal condition, and the farmer is milking a sick cow. Cotton seed meal in the feed will produce hard butter, and some creameries rule it out altogether on that account; but gluten meal makes soft butter; no feed affects the butter fats. He did not believe cotton seed meal would cause garget if fed understandingly.

The 79th and last Institute of the season was held at Topsfield, Friday, March 27, and was well attended. The subject for the forenoon was "How can farmers increase their profits" and was opened by a paper by Mr. E. A. Emerson of Haverhill. In opening he referred to the mistaken policy of considering only as profits the money gain of a business, while in farming there are advantages that money can't buy, the freedom, the out of door life, and close communion with nature. It was man's first occupation, and is now his most important one. The only one of all callings without which he could not live. And while, financially, nine out of ten in other business fail, very few farmers meet such disaster.

There are three ways in which a farmer may increase his profits, first, by education, second, by business methods, and third, by organization.

The farmer needs as thorough an education as the professional man, both in practical farming and business methods, and his opportunities for acquiring such education have greatly increased, with agricultural colleges, farmers' institutes, &c.

In business the average farmer can better himself in many ways. As a rule he is troubled about his help; his

best help he does not pay enough, and for poor help he pays too much. In some directions he could cut off unnecessary expenses, particularly in stock feeding, which is rarely conducted on the best principles. Again he should know what his farm products cost him and sell them at a profit, the same as the merchant does, and not sell at a haphazard price named by his customers. The farm should be run to its full capacity, the same as manufacturing establishments. Manure should be applied heavily, and in many cases two crops be obtained in a season, where now the yield is only one.

The farmer should also attend to his political duties, see to it that the milk standard for a certain per cent. of solids be abolished and in its place, substitute a law requiring that milk for the market be produced from healthy cows fed with wholesome food.

He should also buy his supplies in larger quantities and for cash, and in this connection he recommended organization, particularly that afforded by the grange, by which he can concentrate and utilize individual force, and in closing he made a special plea for the grange, the object of which is to further the farmers' interests.

Mr. Samuel Hawkes, of Saugus, said farming was much more depressed in the West than in the East. The cause is overproduction, brought about by the opening of new land by the railroads. He thought organization a good thing when properly directed, but in the West at the present time a bad thing for the farmers when directed by the farmers for a debased currency.

Mr. N. P. Perkins, of Wenham, coincided with the essayist in the idea that farmers should work more intelligently and find what crops they could raise at a profit and stick to them, rather than to have visionary dreams of what they might do and change from year to year from one thing to another.

The speaker had seen farm tools and machinery, such as mowing machines left out in the field all winter and thought

there could not be much profit in that. Farmers may gain much in organizing and pushing things for their interest.

Mr. Hazeltine, of Haverhill, followed with remarks in sympathy with the former speakers, and said we in New England must be content to farm in a small way as compared with the large farmers of the West. We can make a living but cannot make large profits. He criticised sundry legislative acts as against the farmers' interest, and criticised the farmers for not taking proper interest in such things.

O. S. Butler, of Georgetown, complimented the essayist for the able manner in which he had treated his subject, and finally told of many legislative laws that were burdensome to the farmers, and said that if the farmers would work as hard to protect their interests, as people in other callings, and organize for the purpose, they could have some say in the making of laws for their benefit and make money by it.

Hon. Warren Brown, of Hampton Falls, was called upon and said that it was plain to everybody that the condition of the farmer had improved very much in the last fifty years. A flower garden near the house, an added bay window, and a supply of daily and other newspapers on almost every farm gave evidence of it. He said he thought if some farmers would mind their business more and grumble less at what people in other vocations were doing, they would get along better.

Mr. C. J. Peabody, of Topsfield, agreed with the former speaker in the last of his remarks, by illustrating cases that had come under his personal observation, and cited cases of bookkeepers, clerks and others, where they were shut up in ill ventilated rooms all day and lost their health, and worked hard, and at the end of the year were no better off than the farmer, they only had earned their living, and the farmer had done that and had had pure air to breathe and was well, hearty and robust.

At the opening of the afternoon session, President Ware said that this was the seventh and last of the

successful series of Institutes conducted by the Society during the winter. He also read several very complimentary letters concerning the recently published transactions of the Society from parties outside of the state as well as in the state. The subject for the afternoon was "Poultry," to be opened by Mr. T. C. Durkee of Peabody, but on account of his unavoidable absence, President Ware called upon O. S. Butler of Georgetown. The speaker said before spending one dollar on poultry, make up your mind what you want to do, whether to raise spring chickens for an early market or raise eggs.

To obtain these different results one should work differently and with different breeds ; the eggs that are produced nearest to market bring the best prices. All these eggs that go into market would not find such ready purchasers if the customers knew their history. In the large poultry yards it is customary to examine the eggs in an incubator after seven or eight days, and to take out those that are infertile (they can be distinguished by that time), and send them into market. As long as eggs are sold by the dozen and one is raising them for the market, the Leghorn fowl is the variety to keep, but if one is raising eggs by the pound, the gray necked Brahma is better. For a good all around fowl the Plymouth Rock stands well. They are fair layers, and the fowl makes the best for the table ; he would keep the same breed all the time but would change cockerels every year ; he would advise any one engaging in the business to commence in a small way and work up. If he starts on a large scale and gets disease among them it is hard to eradicate it without quite a loss. A great mistake is made in overfeeding chickens. He rarely fed them until they were two or three days old, and then he gave them a little finely powdered cracker, boiled eggs or skimmed milk. In the winter he fed cabbage and onions to his fowls, and they ate it with a relish. In the winter the speaker keeps about six inches of sand on the floor of

the coop and puts a clean coat of whitewash on his coops every year. He fumigates his coops by burning a mixture of charcoal, sulphur, saltpetre, cayenne pepper and kerosene oil in an open portable iron furnace. Ventilation is important and is best when conducted from near the floor. He usually put a shovelful of earth in the nest of a sitting hen and found it beneficial; dry cracked corn fed to young chicks was injurious, but after they were six weeks old it was all right; dry Indian meal and sprouted oats are good feed for chickens. A hen may lay as well when she is three or four years old as when she is two, but he makes it a practice to change and sell off old hens after two years. A chicken that is hatched out in April and commences to lay in October when eggs are scarce and high is what is wanted; and this is not so apt to be done with a hen three or four years old. He would commence to feed a chicken with egg producing food—ground bone, oyster shells, lime, &c., as soon as he commenced to feed them, and thus saturate them with egg food, then they will commence to lay early and be profitable. He estimated his profits on fowls to average (exclusive of the work he gave them) $1.50 each per year.

REPORT ON ESSAYS AND REPORTS.

The Committee on Essays and Reports have had unusual good fortune this year in having received several excellent papers for their consideration. In the matter of Essays we may say, in the language of the farm, the yield has been large and the quality of the products excellent.

Three essays were submitted to the committee, all of which were gladly accepted and approved. To that by George A. Rogers, of North Andover, upon the theme, "Is it necessarily Hard Times for Good Farmers," the committee awarded the first premium of fifteen dollars. This paper is perhaps more in the line of political economy

than of agriculture, but as it "relates to agriculture," and contains excellent suggestions upon a subject which is at present of more than usual importance, and upon which a good deal of loose and demagogical talk is current, we have thought it both timely and instructive. The subject is not, of course, exhausted in this brief essay, and there is something to be said on the other side, as, doubtless, some influences, perhaps temporary, now tend to make profitable farming more difficult. But Mr. Rogers utters many wholesome truths which farmers everywhere would do well to read and consider.

To Dr. J. W. Goodell, of Lynn, the committee have awarded the second premium of ten dollars for an essay on "Grapes and Grape Culture." The raising of grapes has received as much attention in Massachusetts in former years as in any other state, and several new and useful varieties have originated here, and some of them in Essex County. But the market for a few years past has been superabundantly supplied with fruit from the Lake region in New York, Ohio, and other more favored climes, and growers here have been somewhat discouraged. Dr. Goodell's article is however well worthy of attention, and gives practical directions as the result of his own experience.

To M. Sumner Perkins, of Danvers, the committee have awarded the third premium of eight dollars for his essay upon "Six Crops of Greatest Value in Essex County."

Only one report of sufficient importance to demand a premium was received by the committee, and this was an excellent one by O. S. Butler, of Georgetown, on the "Comparative Value of Crops as Food for Cattle." For this the committee have awarded the highest premium of ten dollars.

No "statement of actual farm accounts" has been submitted. The attention of the committee has been drawn, however, to a "new and complete system of keeping farm accounts," which has recently been published by

George A. Rogers, of North Andover. It is simple and complete, and costs only fifty cents, and we recommend it to the farmers of our society.

Just previous to making this report the writer was grieved to learn of the sudden death of Hon. Nathaniel A. Horton, of Salem, a member of this committee, who was prevented from participating in the present proceedings by his last illness. Mr. Horton was for many years a member of our society, and took a lively interest in its affairs and frequently served upon its committees. He was well and favorably known throughout the county, and it was his pleasure always to promote our farming interests, through the columns of the Salem Gazette, of which he was the senior editor. While it is not the place in this report to make an extended notice of Mr. Horton's character and services, it is doubtless proper, and is, perhaps, a duty, of the committee, to take this brief notice of the recent decease of an esteemed associate.

For the committee,

G. L. STREETER, *Chairman.*

COMMITTEE—Gilbert L. Streeter, Salem; D. E. Safford, Salem; N. A. Horton, Salem; John M. Danforth, Lynnfield Centre; N. M. Hawkes, Lynn.

IS IT NECESSARILY HARD TIMES FOR GOOD FARMERS?

BY GEORGE A. ROGERS OF NORTH ANDOVER.

Hardly a day passes but we read or hear about hard times. There are those who claim to believe that the farmers are a much abused class, that all the rest of the world have conspired together to rob them of their hard earned dollars. That the banks, the railroads, the manu-

facturers, the merchants and middlemen are taking the lion's share of the accumulation of labor, leaving to the farmer only enough to supply his most pressing wants and to pay taxes. That the government, both state and national, legislate mainly in the interests of large capitalists, that the interests of the farmer are almost entirely ignored, save that now and then a few crumbs *are thrown to them to save or win votes.* If all *this* and much more that is preached were true and I believed it, I would quit farming and engage in some other occupation, for I should carry about with me a feeling of degradation, a want of self respect, were I engaged in a business that was not in every way the most honorable and ennobling in the world. No man can do his best in any business in which he thinks the odds are against him. But much of this croaking is not true. I admit that in the past there have been laws enacted favoring other classes at the expense of the farmer. *Whose* fault was it? No one's but the farmers themselves. As long as farmers *belonged* to the political parties and were driven by the party whip, other classes took advantage of the situation and profited by it. When the farmer entered politics as an independent factor, he got his rights, as the two past years will show, and here let me add that the farmer is in politics to stay. This means that in the future he will get what rightfully belongs to him. Again as we all know there are too many middlemen. These fellows always make me think of leeches they produce nothing, and in nine cases out of ten are unnecessary.

But to return to the subject. Go where you will throughout the state and you will find hundreds and thousands of men the owners and cultivators of improved farms, equipped with all the modern appliances of improved farming. Stocked with good cattle housed in comfortable barns, the farmers themselves living in pleasant houses furnished with good furniture and good books, with music to charm the ear and paintings to please the

eye. Ask this class of farmers about hard times and you will find that they know them not. Nine tenths of these men started in poor and all that you see about them is the honest product of legitimate farming. Aside from what you see, they have raised and educated children, have given the boys aid to start in business or the girls a marriage portion; they have also helped to build roads, schoolhouses, churches, and public buildings, and have contributed towards the support of religion.

A business that has enabled these men to accomplish such results in spite of governmental disfavor, middlemen, and the rest of the croaker's list, must in itself be a good business. Do we hear of one farmer failing when we hear of ten manufacturers or merchants? Do you know of a single instance where an industrious, temperate man who has run in debt for a farm, has had it sold at mortgagee's sale, unless from some unforeseen misfortune?

In every community you will find well to do men who have acquired all their property by tilling the soil. You will also find another set of men, who complain that farming does not pay. In the latter case the trouble is not in the business but in the men. Were they engaged in other business they would go to the wall.

The trouble with most of those who complain that farming does not pay, is laziness and shiftlessness, two very hard complaints to cure. They do not keep accounts and fail to credit the farm much that properly and justly belongs to it. For instance, let us suppose that a man with a family of five persons wanting a home, purchases a farm of fifty acres, with good buildings thereon, within three miles of a railroad town, at $80 per acre. The use of the house for a home would be worth $150; fuel from the farm, $50; vegetables, milk, butter, eggs, poultry and pork, $150; use of horse aside from necessary farm work, $50, making $400, ten per cent. on the whole investment. Not coming in ready cash we do not consider them as a part of the income. But they would form a very impor-

tant part of one's out goes if they had to be paid for. The majority of farmers do not realize what it costs a mechanic to provide the milk, eggs, fruit and vegetables for his family.

Money in a farm at five per cent. is as well invested as money loaned at seven per cent., for one does not need to be looking for new places to invest, and then land well located is reasonably sure to advance in price. Money invested in real estate generally pays better than railroad stocks. The figures of 1888 which I have at hand, show that out of 650 railroad companies in the United States only eighty-three paid dividends to stockholders, of these only nine paid ten per cent.; seven, eight per cent.; fourteen, seven per cent.; twenty-four, six per cent. and the remainder paid from one to four per cent.

The reason that a farmer cannot hope to make a million dollars out of his business, is because it cannot be carried on profitably only within narrow limits; within that limit it may pay a better per cent. than a business that yields a million dollar revenue.

The secret of large gains is contained in the saying "large sales and small profits." Philip Armour in his statement before the senate committee in reference to pressed beef trusts, claimed that his average profits on 340,649 head of cattle, stamped and sold in one year, was only $1.22 per head, a per cent. of profit which the average farmer would consider small indeed. If farmers kept accounts they would be surprised at the per cent. of profit upon their products, even at the present low prices. They would take new courage and use every effort to increase production. For instance, in this year of low prices, I find that our potatoes sold in the open market, return us a net profit of 33 1-3 per cent. on the cost of production, and that our Hubbard squash if sold (as I think it will be) at $30 per ton, will for every dollar invested return two. What other legitimate business can you name that will do

as well? Hundreds of cases like the above can be cited. What better proof need be furnished to prove that good farming does pay. An era of low prices is upon us. There are causes that have long been at work and are still working, and we must expect lower rather than higher prices in the future. The tendency in all departments of industry is towards cheaper production, and there is no reason why we farmers should be able to buy a lumber wagon, a mowing machine, a shovel or hoe, a pound of sugar or a yard of cloth for half the price of twenty years ago, without a corresponding reduction in the price of goods we have to sell.

Now comes the question, "Can Massachusetts farmers at present prices get fair pay for their labor and interest on capital invested?" In answer to which I will say it depends upon how they farm. If he follows in the old ruts made by his father, and sells hay, small and inferior vegetables and poor butter, I will answer *no*. But if he farms intelligently, making every acre cultivated produce a good crop of something that the market demands or that can be fed upon the farm, and thus be condensed and converted into more valuable forms, I answer *yes*.

The farm is a factory where the raw materials are taken and converted into more valuable forms. The further we continue this process, provided the machines (animals) are good ones, the better it is for both farm and farmer. With eggs selling at thirty cents per dozen, and cabbage at fifty cents per barrel, just think how much easier it is to market a certain number of dollars worth of the former than the latter. Thirty dozen of the former can be put up in one hour and carried to market in a light wagon and will bring nine dollars. It takes eighteen barrels of cabbage to come to that sum. It will take a man half a day to cut and barrel that amount, and a man and heavy team half a day to deliver it. The cost of putting up and marketing the eggs will not exceed one dollar. The cost of putting

up and selling the cabbage will amount to three. Farmers that live a distance from market should aim to produce such crops as can be profitably manufactured on the farm. Massachusetts cannot compete with the West in grain growing nor with the Southwest in beef production, but in products that require intelligence and skill, the odds will be in her favor.

My object in writing this paper is to encourage young men who are about to enter upon their life work, to take up farming, and those that have had poor success to try again. That agriculture offers the best opportunity to develop the physical, intellectual and moral faculties of a man is not disputed. I believe that farming pays a better per cent. to a certain limit (and that limit depends upon the ability of the man) than any other business. The man that farms intelligently is sure of a comfortable living.

The conditions of success are that we make our products of the very best quality. That we study our business and then put the best there is in us into it. That we always do the best we know. So many of us fail to do this that the wonder is not that our farms pay so poorly, but that they pay as well as they do. Few of us realize how far we come short of making our farms produce what they might. None of us know the possibilities of production. To most of us 225 bushels of shelled corn, 1061 bushels potatoes and 11 1-3 tons of Hubbard squash to the acre seems incredible. Nevertheless such crops have been raised. Many of us fail to save in the best possible manner what our farms have produced.

Again how much we lose in failing to feed in such combinations and in such a way and at such a time as will give the best results. How much we lose by keeping inferior animals. The best are none too good for all. Farming in the future will demand more thinking and less muscle. The successful farmer must plan wisely and execute his plans skilfully. As a business man he must adopt business methods. He must respect himself and his calling and others will do the same.

GRAPES AND GRAPE CULTURE IN ESSEX COUNTY.

BY DR. J. W. GOODELL, OF LYNN.

There is an old saying, "Wine is the milk of old age." This may be substantially true for the sick, but our preference is to take it in the original package, of a well ripened bunch of good grapes, fresh from the vine, with the bloom and bouquet still on the outside. Then we can say with truth "It cheers without inebriating." In this form it stimulates digestion, and is an acknowledged blood maker, building up the system in all wasting diseases, like consumption, and its scrofulous kindred ailments. In certain foreign countries the use of the grape has the title of the "Grape cure," each patient eating several pounds per day, and gaining both strength and flesh. We much prefer this form of the elixir of phosphates to that put up in bottles (and sold at one dollar per bottle or six for five dollars by some unprincipled quack).

Granting that the grape is a good and wholesome fruit, we naturally have the desire to grow it in our own gardens, and are willing to receive any light gained by the experience and observation of those who shall have spent time and money in striving to accomplish that object.

The first question to be decided is, "In what kind of soil does the vine flourish best?" The vine may grow in almost any soil, but does not flourish unless the ground is well drained, sandy loam well enriched with old well rotted fertilizer. It requires water but from the surface, instead of the sub-soil. The situation should be fully exposed to the sun, and a free circulation of air, though sheltered from the north and west winds, which are liable to cause blighting of the young fruit.

Having decided upon your location and properly prepared the soil, comes the very important question as to the variety to be planted.

A prime factor entering into this question in our latitude is the length of time required to grow and ripen both fruit and cane. Certainly we must not take the season of 1891 to guide us in our decision, when three weeks of October have passed and the tenderest plant has not been injured by frost. We think we would be safe in saying that any grape which requires any portion of October to ripen its fruit should be discarded.

In the average year we have damaging frosts by the 25th of September. The fruit will seldom improve after the foliage has been much chilled. If left on to absorb the frozen sap the fruit will lose its original character and becomes flat and tasteless, decaying in a short time. Any vine which does not ripen its wood in September will run the risk of being winter killed, and should be discarded, or tried as an experiment.

If one has a well sheltered location or is willing to take the vines down from the trellis in the autumn, cover them with some coarse loose material and put them back each spring, he may succeed. Yet the most of our growers do not take the trouble, therefore should not be advised to put out tender or late ripening vines. The vine usually remains where it grows, and lives or dies according to its power of standing the effects of fierce winds and rapid changing temperature.

The great majority of New England grape growers raise grapes for their own consumption and not for market. The first consideration is quality and early ripening. Our first vine would be *Moore's Early*, which possesses all the good qualities required. Second, Hartford, whose greatest fault is dropping, and can be in a great measure prevented by *free irrigation*, while the fruit is ripening, and will improve the size and quality of the fruit. Third, Brighton, one of the finest flavored grapes which we have, that will ripen in September. Fourth, Concord, a good grape, hardy and prolific, yet often overtaken by the frost before its fruit is well ripened, therefore uncertain.

We should advise the planting of the Worden as superior in many respects, and ripening one week earlier. Fine, large, both in berry and bunch; vine of hardy growth, ripening its wood in good season. Fruit of finest quality, rich and syrupy, and for the time it has been before the public has fulfilled more promises than any of its competitors. The Niagara, which was introduced to society with a great amount of ceremony (which, by the way, was dearly paid for by the purchaser), has not given satisfaction to its patrons and cultivators. In fact with us the present year it has behaved worse than any other, has not produced a single good bunch. It may reform, but we look upon it as being *under investigation*. Neither has the Pocklington given that satisfaction which was expected of it. The Niagara has found its congenial climate in Florida, where it is being planted by the acre, and ripens its fruit in June. Our average season is too short for the last two varieties.

Of all the Rodgers' thirty odd varieties, we think No. 4 (Wilder) stands at the head and is well worthy of cultivation. Most of Rodgers' appear to blight and are prone to take on all the fashionable vine diseases. If you have room for only two vines, plant a Moore's Early and a Worden, and you will *rejoice* rather than *mourn* as you look upon well ripened clusters of fruit, bright with the September sun.

Always plant your vines in spring, after the frost is well out of the ground, the soil having been thoroughly prepared the previous autumn. If you have any old bones scattered about the premises gather them all up, break fine, and place among the roots as you plant.

In most of our small gardens we can hardly spare the room for a grape vine to stand out where it must be supported by a trellis, but tacked up to the fence or side of a building. In such case we should advise having a trellis which would hold the vine a foot or so away from the building, and give a free circulation of air behind. The reflec-

tion of the rays of light and heat from a light colored surface would help to hasten the ripening of the fruit and wood of the vine.

If you have more and desire to plant in vineyard form, set *cedar* posts ten feet apart, and six feet out of ground. Then commence eighteen inches from the ground and run strong galvanized wire from post to post, fastening firmly with fence staples. Three other strands may be placed fifteen inches apart. Plant your vines at each post and train both to right and left, fastening the vine to the wire by means of leather or soft pieces of cord. Copper wire is sometimes used for this purpose and is very durable, but is liable to cut the vines when heavily laden with fruit.

Fertilizing. In looking over the soils of those countries where the vine has been most successfully cultivated, we find such an abundance of mineral substances that the water is unfit to drink. Soda, sulphur, lime and iron abound with phosphorus in all sorts of combination. In New York state, where such large crops of grapes are raised, we find the whole region underlaid by a bed of lime rock. Hence we are to study the soil and find wherein it lacks the necessary elements of success, applying what is needed. All dressing for the vine should be thoroughly composted. Bone for the phosphorus, and wood ashes for the potash; sulphur, iron and some vegetable mould as an absorbant. Mix well and sprinkle the pile well over with land plaster to prevent the waste by the evaporation of gasses, especially ammonia. Apply in early spring and work in thoroughly. Saving your soapsuds on wash days and applying about the roots will well repay the trouble, or better, partly fill an old barrel with ashes, soot, old iron and ground bone, pour your suds on to it and apply from time to time.

Thinning the fruit. Here will come the test of your moral courage. Taking your clippers and going through your vines, and cutting out all small and imperfect bunch-

es, sometimes even to one-third or one-half the number of bunches set. But experience proves that you will grow not only larger and finer clusters but actually *more pounds* of *fruit*.

Another thing our most careful cultivators and premium takers do. They bag the best bunches. When the grapes are about one-half grown they slip a common grocer's paper bag over the bunch they want to protect, and pin around the vine on both sides of the stem. This keeps it free from dust and many insect pests. Yet we are told it retards the ripening for about one week. But a frost that would cut the foliage would not harm the grapes thus protected. Another method to improve the fruit is to grow as little wood as possible. When a cane has attained the length you desire nip it in. Go over the vines every week or oftener nipping in all straggling shoots. Cutting away leaves to let the sun in is a great mistake and should never be done. The leaves are the lungs of the plant, and every considerable injury or destruction of or to the foliage is an injury and leads to disease if not death. You will find your largest and finest bunches hidden beneath the dense foliage.

The vine, like all vegetation, has its diseases and insect enemies to contend with, and often frustrates our best endeavors. Many washes have been recommended for application, as lime, sulphate of iron and sulphate of copper, sulphur, and even Paris green mixed with Bordeaux mixture for spraying the vines. I object to mixing poison with my food, and try to keep my vines in a healthy growing condition, so as to escape the need of these remedies of doubtful utility and safety. Sulphur is safe and useful and does not scorch the leaves. The stronger remedies may kill the disease, but destroy the vine as well, or the leaves which are its principle organs of life and growth. In fact the Bordeaux mixture could not be sprayed upon a vine trained upon a painted buiding without great detriment to the same.

We believe in the *best* and *most thorough cultivation* and liberal feeding. Such patients have the least need of medical attendance, and are the best prepared to ward off epidemics or contagion.

We are persuaded that the electric lights are doing good service to the horticulturist by the destruction of millions of insect pests, which are attracted to them and their own death. The enthusiastic entomologist is often seen perched under the arc light with his scoop net in hand, gathering in many fine specimens of moths.

Pruning should not be commenced until the vine has become thoroughly dormant, say in New England about the middle of November, as our object during the summer has been not to grow any superfluous wood. So in pruning we should leave only such canes as are needed as a renewal of the parent vine. Trim all laterals not required back to two buds, and see that the vine is securely fastened to its support (when not layered for winter). If it is not well secured, and such an ice storm as last winter gave us should occur, attended by violent wind, much damage would be done. It is good practice to rake up all grape foliage and trimmings and *burn them.* Whatever disease there may be present will be most likely to be found on the foliage and tender shoots.

Throw a light covering of evergreen boughs, corn stalks or coarse, strawy manure around the roots for winter and let them rest.

SIX CROPS OF GREATEST VALUE TO ESSEX COUNTY.

BY M. SUMNER PERKINS OF DANVERS.

Onions, cabbages, corn, potatoes, squashes and turnips may be justly termed the half dozen staple crops of Essex

County. Each is valuable either as a market crop or for stockfeeding, or both. True there are other crops which are cultivated more or less extensively, yet the above seem to deserve the distinction of being the six most important. In this essay the writer proposes to treat briefly of each, touching upon its culture, fertilization, uses, etc.

ONIONS.

The onion ranks foremost as a money crop. That is to say, speaking generally, the farmer realizes more cash from it than from any of the others. Three or four hundred bushels per acre may perhaps be considered an ordinary yield, though five or six hundred bushels on same area are by no means rare. Hence, at a fair price of $1.00 a bushel, the product of an acre of onions figures well up into the hundreds in value. In selecting a piece of ground for an onion bed, choose fairly level land, free from stones, and composed of rich, loamy soil. Old muck-beds, when properly drained and sanded, often suit the onion perfectly, and produce enormous crops. Yet the product of such is naturally soft in texture and unreliable in keeping quality, as compared with crops grown upon higher and firmer ground. The onion, unlike most other crops, does well when grown on same land for a number of years in succession. Indeed larger yields are generally obtained the second and third years than the first. Land which it is intended to devote to onions, should have been highly cultivated for some years prior to its use for the above named crop. Liberal manuring from year to year is in order until soil is well stored with fertility. Another very important consideration is that the ground be comparatively free from the seeds of weeds, indeed, the expense of tending the crop depends very much on this condition, since if certain weeds, as purslane, witchgrass and chickweed have become established in the soil, onion culture is at best very discouraging work, and profit in the business is out of the question. Besides ordinary farm manure, unleached

wood ashes and ground bone may be named as especially suited to the growth of onions, producing large, solid, handsome bulbs. Wood ashes applied at the rate of one hundred bushels to the acre, supply a fertilizer that is at once cheap and effective. Onion seed is usually sown in the spring, as early as the soil can be properly worked, in drills a foot apart, using four or five pounds of seed to the acre. Cultivation should commence as soon as the rows are up so as to be distinctly seen, and continue throughout the growing season ; for success with every crop depends very much upon keeping the surface soil in a loose and porous state for admission of sun and air. Of late years the ravages of the so-called onion maggot has wrought great destruction to crops, and what is worse, there does not seem to be any reliable means, at present known, for effectually coping with the evil. A light dusting of the young plants with wood ashes or air-slaked lime, just as the eggs of the insect commence to hatch, will perhaps be found as useful as anything in the way of remedy. While onion growing requires much hand labor, and some back-aching work, yet, if a practice of destroying every weed as soon as it appears above ground is strictly adhered to, the battle is half won.

CABBAGES.

Cabbages may be classed next to onions as a money crop. As ordinarily grown, plants are allowed to stand two and one-half feet apart in each direction. This fixes the capacity of an acre at nearly 7,000 plants. Estimating the good heads to be 6,000, and value of same to be four cents apiece, which may be called a fair price, we have $240.00 as the average gross receipts per acre devoted to this crop. The cost of tending a cabbage crop is much less than one of onions as a large portion of the work can be accomplished with horse and cultivator, and the remainder by use of hand hoes. Then when it happens, as it sometimes will, that the cabbage has practically no value in market,

it can be turned to good account as stock food. Cows are very fond of it and it is excellent for producing milk. Nor will it affect the taste of milk if fed just before or during the process of milking. It is also of great value for the farm poultry, as ducks, geese and common fowl apparently prefer it to any other species of green food. In order to raise large firm heads of cabbage a moist strong soil is required. They are great feeders and demand heavy manuring. Surely five cords of good compost should be applied to the acre, and better still would be eight or ten. Potash in form of wood ashess seem to be particularly adapted to cabbage growth, and a handful of same applied to each hill, or a broadcast distribution of say one hundred bushels to the acre, materially adds to size and quality of crop. Fish waste and refuse of glue works are also deemed by some economical fertilizers. For a general crop of cabbage it is more satisfactory to sow the seed where it is intended for the plants to grow, than to practice transplanting, for the latter plan is more trouble, it can not be depended upon in times of great drought, and at best, it sets the crop back a fortnight more or less.

CORN.

The importance and value of the corn crop is shown by the fact that it forms the basis of our system of cattle feeding. Both the grain and stalk of the corn plant have always been of great value to our stockmen and dairymen, but with the advent of the silo, the cultivation and consumption of the crop have largely increased. At first farmers were skeptical concerning the benefits derived from feeding ensilage ; but the old-time prejudices have become dissipated under the influence of extended practical experience in its use, until it is now generally acknowledged by stock owners, that good corn ensilage affords a most healthful, nutritious and economical food for most farm animals, supplying as it does, green, succulent matter in winter, when there is a general dearth of such substances. Corn

is well adapted to much of the rough, rocky land of the county, since it is of vigorous growth and its strong, penetrating roots spread out a considerable distance, running around rocks and stumps, and thus acquiring plant food, where crops of feebler habit would perish. It also has a beneficial effect upon the soil, loosening it and improving its mechanical condition. The common, yellow, field corn is cultivated to an extent in the county, and while it does not yield a large return in money value, yet it is a very useful crop, can be raised on cheap land, at small cost, and the product is all needed to feed the animals on the farm, thus removing any necessity of hunting up a profitable outside market. The corn itself is usually ground on the ear, cob and all for cows and horses, and the stalks, when well preserved, equal in nutritive value a good quality of English hay pound for pound. At all events it is so regarded by men of science. The long coarse stalks are relished and eaten better, if cut a few inches in length and sprinkled with a little meal or shorts. It is quite a common practice to sow corn, when intended for foddering purposes, either broadcast or very thickly in rows. This does not seem to be the best way as a heavy growth of soft watery shoots are produced, that cannot ripen. Better always sow thinly in rows, allowing a few inches of space for each stalk and delay harvesting until plants are fully developed, and make respectable ears. A few handfuls of ashes, hen manure, or good fertilizer in the hill, is of benefit to the crops. The horse and cultivator should be able to do about all the work of tending the crop, so it is one of the easiest that we have to raise.

POTATOES.

In days gone by, when our fathers and grandfathers raised the old fashioned Chenangoes, about all that was necessary to produce a good crop of potatoes was to dig a hole in the ground, put in a little manure, drop seed and cover it. As soon as up, a hoeing was given and later on

perhaps another. In due season a good crop of large tubers was well nigh sure to be forthcoming. But now-a-days in this vicinity, results are very uncertain. With the advent of the Colorado beetle and numerous kinds of blight and rot, we have found it safe not to count our potatoes before they are dug. And even then the crop is far from a sure thing, since disease often appears after harvest. One of the first requisites for successful potato culture is good, strong, *new* land. By new land strictly speaking, is understood land that has never before been under the plow ; viz. newly cleared ground ; but now land, that under crop rotation, has been recently under sod is called "*new*." Such soil is comparatively free from the various species of fungous growth. Nor are the bugs as numerous. As to fertilization, excellent crops of smooth, handsome tubers are produced on such new land, by the use of a small quantity of high grade fertilizer sprinkled in the hills. The various commercial manures, such as high grade fertilizers, phosphates and dissolved bone certainly tend to the production of smooth, clean potatoes, whereas the fresh, green manure of our domestic animals, favors the growth of the scab and fungous diseases. If manure be used for potatoes at all, let it be old and well rotted, and apply it in the fall previous to time of planting. Of late years, the so called trench system of growing potatoes has received considerable attention and deservedly so. This plan consists essentially in opening deep furrows of eight or ten inches, covering bottom of furrow with a couple of inches of fine mellow soil, dropping the seed and covering three or four inches deep. The depression in the furrow is filled in during the successive hoeings of the crop. The advantages of the practice may be briefly summed up as follows. The roots of the vine are well down in the moist earth, where they can stand the drought. The tubers are well covered and out of the way of danger from sun scald. It is easy work to hoe the crop, which merely consists in levelling the ground about the plants, while by the old method of culture, hills have to be formed.

SQUASHES.

Squashes are an easy crop to raise and pleasant to handle. Most any otherwise vacant and useless spots on the farm can be made to produce a hill of squashes, and the corn field will support a limited number of vines without injury to its mainly important crop. Rich soil is certainly needed to grow a large squash crop and six to ten cords of good manure per acre, are none too much for an application. Hills should be made ten feet apart in each direction, and a dozen seeds sown to each hill, in order that a sufficient number of plants may stand after the ravages of the bugs have ceased. Land plaster is commonly used to rid the vines of insects, sprinkling a handful or so upon each hill. As this merely keeps the bugs off and does not kill them, the application of a weak solution of Paris green, is a much surer remedy. In preparing land for squashes, it is well to spread on a heavy dressing of manure broadcast, and in addition where the hills come, to dig in a couple of shovelfuls of good fine compost, which is to be covered and the seed dropped on top. The entire cultivation until the vines commence to run, is readily done with the horse cultivator. It is a characteristic of the squash vine to form new roots at intervals, throughout its length. This feature should be encouraged by covering the vines with earth at these points, for not only does it afford the vine an increased feeding area, but when it occurs, as it sometimes does, that borers destroy the main root, these auxiliary feeders save the vine from ruin. To be safely kept through the winter, squashes require a moderately warm and dry apartment for their storage. We have found that a cellar heated by steam or furnace heat is a most excellent place for the purpose. In this way we have kept them in good condition until late Spring.

TURNIPS.

The turnip is very useful on the farm, as a food for all

classes of stock. In connection with hay and grain, it forms a splendid winter ration for horses, cows and sheep. It should always be cut finely, if fed raw, to prevent choking. Hogs and poultry thrive remarkably, when steamed or boiled turnips comprise a considerable portion of their diet. Fresh, new land is necessary to grow smooth, clean turnips, as old rich garden soil almost invariably produces prongy and worm-eaten bulbs. The large Ruta Baga turnip should be sown as early as May or June, while the common round turnip does well when sown as late as August. Some farmers sow turnips broadcast, but the most satisfactory way seems to be, to plant in drills, three feet apart for Ruta Bagas and eighteen inches to two feet for round turnips, thinning the former to one foot apart in the row, and the latter to two or three inches. In this shape they may be cultivated and thinned properly and with ease, which greatly adds to the chances of the crop. Turnips yield well, are little trouble to grow, and generally sell well at profitable prices.

In conclusion let it be said that the majority of crop failures are directly traceable to either lack of adequate fertilization or to insufficient cultivation. The soil cannot well become too rich for most crops. At all events it very rarely does in Essex County. Next to fertilization in importance comes cultivation, which can hardly be too intensive. Keeping the weeds in check is insufficient. Always, the surface soil should be light and mellow.

COMPARATIVE VALUE OF CROPS AS FOOD FOR CATTLE.

BY O. S. BUTLER, OF GEORGETOWN.

As no statement has been presented to the committee on the above subject, in regard to the comparative value of

crops as food for cattle, I have been requested to present the subject to the society, in the form of an essay or report.

The reason why our farmers do not make practical tests and present the results to the society, is not for lack of interest in this subject, but because of the difficulty in obtaining satisfactory data upon which to base an opinion that would become authority under different conditions and localities. Even our experiment stations caution our farmers against taking their statements as authority under all conditions, for the value of any crop as food for cattle depends as much upon the cost of producing it, as upon its intrinsic value of nutrition, and the cost of producing a crop, depends upon the quality of the soil, and its adaptation to certain crops, and its entire unfitness for other crops. And then the location of the land is an important factor of expense in the production of a crop. Land that is located so near the city or village, as to be worth from five to ten hundred dollars per acre, could not be used for pasturing, or for a corn crop, no matter how nutritious the crop produced might be. A crop that might be produced with but little expense for labor, manure and land cost, would be of great value to the poor farmer, even though its intrinsic value, judged by its per cent. of nutrition, might not be as great as some other crops, that it would be impossible for him to produce under his conditions and environments. And then the value of any crop is increased or diminished by the results to be realized. One kind of food may be of great value in producing milk, while quite a different crop would be requisite in producing beef, and still another crop entirely different, would be valuable as food for growing stock, such as colts, and calves, and lambs. So it will be seen, that the value of any crop as food for cattle, depends upon the results to be realized.

And still further, the value of any crop as food for cattle depends upon the condition of the animal to be fed, as to its healthfulness or its unhealthfulness. It would be more than waste to give a heavy, nutritious food to a dyspeptic

animal. It often happens that a very cheap food would be very valuable for an animal for a month or a year. When the digestive and assimilative organs are kept in good condition, the animal will thrive on comparatively cheap food. But there are certain general rules that may be observed under all conditions with comparative success, as our experience and observation has proved.

First, all crops as food for cattle, should be fully matured in order to obtain the best results; not fully ripe, but well developed and matured. The early spring grass in our pastures may increase the flow of milk, but it does this at the expense of its quality. The milk and butter produced from the early spring grass, is not at all like the milk and butter produced from the mature grass of June and July. The time was when we filled our silos with green, immature corn, but this ensilage had to be fed in connection with other more nutritious food in order to obtain the best results. But now, no intelligent farmer thinks of cutting his corn for the silo until the ears have begun to glaze and harden, and this ensilage comes nearer to a perfect food for cattle than any other single crop, and this is true of all crops or foods that are used to develop and sustain animal life, whether gathered from the field or the stall. Lamb or veal may be very palatable, but not as nutritious as mutton or beef.

Another factor of great importance in estimating the value of any crop for food for cattle is the proper combination of foods. There are certain kinds of food that are entirely useless when fed alone, but are of great value when fed in connection with some other kinds of food. The agricultural chemist informs us that turnips contain but six per cent. nutritious substance and ninety-four per cent. of water, that green fodder corn stands about the same, that straw, barley, oats or rye are incapable of sustaining animal life; and yet practical science has demonstrated that a partial feed of green corn fodder to milch cows always increases the flow of milk without diminishing the

quality, and that the best mutton and wool in any country is produced in Scotland from herds of sheep that never taste of a mouthful of food in winter except turnips and straw. We are informed, by good authority, that cabbages or potatoes are incapable of sustaining animal life, when fed alone, but we know that the strongest and healthiest race of men and women is the one that finds its chief diet in cabbage and potatoes. The mistake of the chemist is found in the fact that he claims all liquid as water when the facts are quite different. The liquid of turnips, of potatoes, of corn, of cabbage, of apples, and of grapes, are entirely different each from the other, and neither of them is pure and simple water, and either of them standing alone may not be able to sustain animal life, but when used in combination with each other may produce the best possible results. Of this there can be no doubt. If this is true, then in order to estimate the value of any crop as food for cattle, we must observe the above mentioned conditions.

First—The crop best adapted to the land, its location and value.

Second—The condition of the animals to be fed.

Third—The results to be obtained.

Fourth—Whatever the crop fed, it should be well matured.

Fifth—It should be used in such combination as to constitute it the most natural food for the animal fed.

I have been greatly interested in the experiments made at the New Hampshire Experiment Station, under the direction of Prof. Whitcher, as to the comparative value of corn ensilage with dry fodder, and I take the liberty to quote a few statements made in Bulletin No. 14. Prof. Whitcher says, "First, more actual food material can be produced from an acre of corn, than from any other of our common farm crops. Land capable of producing two tons of hay, will, as a rule, produce twenty tons of ensilage, having at least twenty-five per cent. of dry substance or actual food material.

40,000 lbs. of ensilage equals 10,000 lbs. of dry matter and 4,000 lbs. of hay equals 3,000 lbs. of dry matter. It is safe

therefore to say that three times as much dry substance may be produced from a given acre of corn, as from a like acre of grass. Second, the cost of a hundred pounds of dry matter is slightly less in corn than in hay, as the following statement will show:

Cutting the corn in field, per acre,	$2.00
Loading and drawing to barn,	3.75
Cutting and packing in silo,	2.40
Use of engine and cutter,	1.25
Total,	$9.40

Yield per acre, fifteen tons. Cost per ton, 62¾ cents.

Under more favorable circumstances, as to distance and location, a seven acre field of corn was harvested with the following results per acre:

Cutting and stooking,	$2.16
Drawing in,	2.56
Husking corn,	5.00
Drawing corn to mill,	1.50
Grinding corn,	1.80
	$13.02

While I cannot give the exact figures as to the per cent. of dry matter in each crop, yet there was not above 6,000 lbs. in the husked crop as against 7,500 lbs. in the crop put in the silo. One hundred pounds of dry matter, at the time of feeding out, would cost for harvesting alone, twenty-five cents in the husked crop, and fifteen and two-thirds cents in the silo. Add to this the greater efficiency of the dry matter, pound for pound, and it is evident that from an economic standpoint the silo has the advantage. In addition to the above statement I have the testimony of many others fully corroborating their truthfulness, and after giving this subject very careful consideration for the last ten years, and corresponding with persons in all parts of the country, I should say that for the country farmer, the corn crop stands at the head. *Corn is King even in Essex County.*

IN MEMORIAM.

In obtaining the names of members of the society deceased, a list of members was sent to the Trustee in each town and city for revision, requesting date of death d age of each member deceased, with brief notice of each in printing or writing, from which and from others, the following has been compiled by your committee:

Hon. George B. Loring died suddenly at his home in Salem, Sept. 15, 1891, at the age of seventy-four years, six months. He had been sick about ten days but appeared to be improving and his friends were encouraged that he would recover, until within a few hours of his death. Dr. Loring was born in North Andover, Mass. His father was for more than forty years the Unitarian clergyman in that town, and was a descendant of John Alden of the Plymouth colony, while his mother was a niece of Samuel Osgood, the first Postmaster General under Washington. He was a graduate of Harvard College in the same class with James Russell Lowell, and took his degree in the Harvard Medical School, having been a student under Oliver Wendell Holmes. Soon after his graduation he was appointed surgeon of the Marine Hospital at Chelsea, where he remained in active practice seven years. He then resigned and went to Salem, where he came into possession of the Pickman Farm, which was his home during the remainder of his life. In 1864 he founded the New England Agricultural Society and was its president for nearly a quarter of a century. For four years he was a trustee of the Massachusetts Society for Promoting Agriculture and has for a long time been Vice President of the Essex Agricultural Society, in which he always took a great interest. As an author and public speaker he won distinction, his "Farm Yard Club of Jotham" papers being recognized as a standard in their line and his many contributions to the North American Review and other magazines making his name a household word. At the time of his death he was engaged on a

work on Spain and Portugal. Dr. Loring was Postmaster of Salem from 1853 to 1858. In 1866-67 he was a member of the Massachusetts house of Representatives. In 1873-4-5-6 he was president of the Massachusetts Senate. In 1876 he was elected to Congress from the old fifth District and was reelected in 1878. In 1881 he was appointed Commissioner of Agriculture by President Garfield, receiving his commission and instructions from the President the day before the latter was shot. Soon after his inauguration President Harrison appointed Dr. Loring as minister to Portugal which position he resigned within a year feeling the need of rest. He has since lived quietly at his farm in Salem engaged in literary work. He leaves a widow and one daughter.

Dr. William Cogswell, who died August 15, 1891, was born in Atkinson, N. H., April 21, 1821, of stock well and highly known, educated in the schools of his native town. He chose medicine as his life study. He was a trustee of the Academy in his native town, President of the State Medical Society for two years, was appointed and served as medical examiner, was elected as a member of the Governor's Council, and served as Surgeon in the 50th Massachusetts Regiment. In various ways prompted by a tender heart and generous nature, he endeared himself to a large circle of friends through a long life, and laid down his work in the way that he himself had desired to lay it down without suffering, without an interval of inactivity, surrounded by his friends and in his home. In the practice of his chosen profession Dr. Cogswell was faithful to its duties, responding promptly to the call of suffering and offering for its relief all that a kindly heart and an experience valuable, by reason of its variety, could suggest. To the younger members of this society he was a friend and counsellor, ever glad to hear of the success of another, and to aid it generously by advice or personal service. Positive in his convictions, and fearless in his expression of them, he was an active force in the world,

and by the integrity of his character, his power was directed to the accomplishment of good. We desire to express to his wife and his family friends our sympathy, and to place on record our appreciation of the value of a life lived as his has been lived. He is mourned in the hearts of many and in these hearts will be reared monuments of remembrance to many kindly deeds unknown to the world. Dr. Cogswell was for many years a valuable member of the Essex Agricultural Society, and for several years Trustee of the Society. His lectures and addresses before the Society were characterized by careful preparation, energetic delivery, and practical application.

JOHN A. HOYT, of Georgetown, died May 29, 1891. He had been a member of the Society for a number of years and had taken a great interest in its prosperity, a man of business sagacity and keen insight into what affected the general welfare, of varied talents and of great value to the community where he resided.

THOMAS G. ORDWAY, of West Newbury, died January 25, 1890, aged 71 years 11 months.

AMOS POORE, of West Newbury, died July 2, 1889, aged 80 years.

CALVIN ROGERS, of West Newbury, died June 15, 1889, aged 77 years 3 months.

HON. MARCUS MORTON, ex-Chief Justice of the Supreme Court of Massachusetts, died at his home in Andover, Feb. 10, 1891, aged 71 years 10 months. Judge Morton was the son of Marcus and Charlotte Morton and was born in Taunton, April 8, 1819. He was a member of the famous Constitutional Convention of 1853, being elected from Andover in 1859. He was appointed Judge upon the Superior Bench of the State, and in 1869 was appointed Judge in the Supreme Court. Gov. Long appointed him Chief Justice in 1882, this position he filled with distinction until about three months before his death, when ill health compelled him to resign. He was a valued citizen of Andover, long a member of this Society and took a

general interest in all that pertained to elevate and educate the people.

Samuel K. Johnson, of Andover, was formerly a resident of North Andover, where he had served as selectman of the town, afterward removed to Andover where he died May 16, 1891, aged 71 years.

Henry A. Bodwell, of Andover, died quite suddenly at his home May 17, 1891, aged 69 years. He had long been a member of this Society and had served as Trustee.

Benjamin A. Gray, of Salem, died Feb. 27, 1891.

Clement R. Hanson, of Salem, died April 5, 1891.

Mr. John P. Foster, of North Andover, died June 4, 1891. Mr. Foster was the first President of the North Andover farmers' club and was one of the most thrifty farmers in Essex County, a thoroughly honest and reliable man, a good neighbor and citizen.

Nathaniel Peters, of North Andover, died March 16, 1891, aged 74 years. The death of Mr. Peters at North Andover on the 16th inst, closed the earthly record of a life in some of its aspects so singular that no ordinary "notice" can do more than hint its quality. Only a spiritual biography of the man whose days were free from those outward things commonly called "eventful" could reveal with any clearness the depths of the surface, or the wonted play of his nature. His "soul was like a star, and dwelt apart." And if one star differs from another in glory, this spirit-star had a glory of its own. Yet with a radiance so calm and modest it shone, that even to some who had always known its existence and magnitude, its light seemed not fully to have reached their world.

The seventy-four years of his life had so ripened all its fruit that it fell off like the olive, "blessing Nature who produced it, and thanking the tree on which it grew." And others repeat the blessing and the thanks.

A "white pine Yankee," tall and straight, Mr. Peters was a type of the best old New England stock, grown likewise to the generosity of nature which embraces all

the good of humankind. Even his severities were gentle. A certain survival of Puritan aspect was lighted up with the genial glance of an eye which bore recognition and sympathy for the common lot of earth. Modesty approaching to shy diffidence was supported by the manly integrity and courage of simplicity which turn the seeming weakness of a character into finer strength. There was an outward uprightness of carriage that spoke of the rectitude within. He was more like to do a good deed by stealth, than to wait for thanks or acknowledgment. Every man who so lives must help other men to live in the spirit of this creed.

Samuel Hutchinson, of Peabody, died June 27, 1891, aged 76 years. For many years he had not enjoyed good health.

Sidney C. Bancroft, of Peabody, died July 28, 1891, aged 65 years. For many years Mr. Bancroft was a distinguished member of the Essex bar. He was born in Peabody in 1826, and began life as a mason. A love of literature rather than a distaste for mechanics prompted him to leave his trade and adopt a profession; as a parliamentarian he had few equals. He was a regular attendant at all the meetings of this Society whenever health would permit, and his voice was always heard in all debates where he will be much missed.

William H. Little, of Peabody, died August 16, 1891, aged 82 years 10 months. He was born in the same house where he died. For many years he was engaged in the leather business. He was a man of more than ordinary intellectual powers and had a marked taste for general mechanics. He was very genial, always having a sunny smile and a pleasant word for all he came in contact with. He had served his native town two years in the legislature and for many years he had been a valued member of the trustees of the Peabody Institute, also he was a man who took a great interest in the fire department of the town, having for many years been a member in his young-

er days, and always gave his best thought and intellect to whatever public trust he had to do with.

DANIEL D. FLANDERS, of Haverhill, died Dec. 12, 1890, aged 66 years. He was born in Sandown, N. H., but came to Haverhill when quite young, and learned the trade of currier, being an apprentice to the late Lyman Worthen. At a later date he became a shoe manufacturer, being for some time a member of the firm of Flanders & Dawson, and afterward the firm was Flanders & How. Mr. Flanders was never a farmer but was always interested in this Society and its work. He was a man of commanding physique and was well known and respected by all.

JAMES A. BARTLETT, of Danvers, died Sept. 20, 1891.

ISRAEL P. BOARDMAN, of Danvers, died Feb. 17, 1891.

EDWIN F. PUTNAM, of Danvers, died Aug. 18, 1890.

DAVID TULLER PERLEY, of Ipswich, one of the best known and wealthiest farmers in Essex county, died at his residence in Linebrook Parish, Ipswich, August 16, 1891. He had been sick only two days. The cause of death was measles. Mr. Perley was born in Linebrook, Jan. 17, 1824. He inherited a large farm from his father, and by his thrift and industry had amassed a large fortune. He was well known throughout the eastern part of this state as a cattle dealer. His reputation had always been, that he was upright and honest in his dealings, and square on a trade. Mr. Perley had been married three times, and leaves a widow and eight children to mourn his loss. The funeral took place Wednesday afternoon, it being delayed one day to allow Oscar Perley, his eldest son, time to arrive here from Nebraska.

HORACE WARE, who died May 2, 1891, at the age of 71, was born in Salem, on the Pickman Farm. At an early age he began farming on his own account at Marblehead Farms District. He was a man of unusual strength and vigor, of pronounced and persistent character and generous in all relations of life. He was a successful farmer, an

eminent grower of vegetables, making onions a specialty. He was for many years an active member and trustee of this Society.

W. P. DOLLIVER, of Gloucester, died in September, 1891.

H. G. SANFORD, of Gloucester, died in February, 1891.

WILLIAM JONES, of Newburyport, died March 14, 1890, aged 59 years 7 months. He was a carpenter by trade.

ROBERT A. SMITH, a farmer of Newburyport, died Nov. 15, 1890, aged 70 years 11 months.

GEORGE L. WALKER, of Newburyport, died Jan. 22, 1891, aged 70 years 11 months.

GEORGE J. L. COLBY, of Newburyport, died Nov. 30, 1890, aged 71 years 10 months. Mr. Colby was widely known as an editor of ability and always took a deep interest in county affairs.

ROBERT G. BUXTON, of Peabody, died Nov. 26, 1891.

Dr. GILBERT L. STREETER, TREAS., IN ACCOUNT WITH THE ESSEX AG'L SOCIETY. Cr.

1890-91.		1890.	
To Bank Dividends for October,	$385 25	By Balance of previous account,	$177 01
State Bounty,	600 00	Amt. of premiums and gratuities awarded by the Trustees,	1859 75
Bank Dividends for April,	391 55	Rent paid to the Salem Athenæum,	25 00
State Tax on Bank Stock refunded,	253 71	Expenses of Farmers' Institutes,	128 91
Interest on Mortgage Note,	60 00	Expenses on Treadwell Farm,	27 00
Received from New Members,	222 00	Bills paid on account of Annual Exhibition,	16 50
Proceeds of the Annual Exhibition,	695 12	Interest paid on Temporary Loan,	15 00
Income of the Treadwell Farm,	277 68	Printing Transactions, &c.,	400 31
Unclaimed Premiums,	148 75	Miscellaneous Expenses,	32 71
		Secretary's account,	242 56
	$3,034 06	Treasurer's account,	51 50
		Balance on hand,	57 81
			$3,034 06

Funds belonging to the Society, November 1, 1891.

10 shares in National Hide and Leather Bank, Boston,	$1,101 87	*Amount brought forward,*	$14,390 86
3 shares in Revere National Bank, Boston,	377 62		
18 shares in First National Bank, Salem,	1,914 66	Amount reported last year,	14,156 04
18 shares in Salem National Bank, Salem,	2,000 00		
42 shares in Asiatic National Bank, Salem,	1,281 25	Gain,	$234 82
12 shares in Mercantile National Bank, Salem,	1,226 50		
23 shares in Merchants' National Bank, Salem,	1,189 50		
5 shares in First National Bank, Danvers,	375 00		
8 shares in National Exchange Bank, Salem,	800 00		
16 shares in Warren National Bank, Peabody,	1,595 40		
15 shares in South Danvers National Bank, Peabody,	1,471 25		
Mortgage Loan,	1,000 00		
Cash on hand,	57 81		
Total,	$14,390 86		

G. L. Streeter, Treasurer.

Salem, Jan'y 7, 1892.

The above account has been examined this day, and is found correctly added and properly vouched, and the securities as stated.

JOS. H. PHIPPEN, Auditor

CONSTITUTION

OF THE

ESSEX AGRICULTURAL SOCIETY.

ARTICLE 1. There shall be a President, four Vice Presidents, a Secretary, and a Treasurer, who shall be Trustees, *ex-officio*. The President, Vice Presidents and Secretary shall be elected at the annual meeting by ballot and the Treasurer by the Trustees, annually, at their meeting in November. In addition to these, one Trustee shall be elected annually for each town in the County, and the Trustee for each town shall be elected by members of the Society in said town, at a meeting called for that purpose,* in accordance with notice issued by the Secretary, and shall continue in office until another is elected in his stead; and such election shall be final, and shall constitute the Trustee so elected a member of the Board of Trustees of the Society; and the result of the election in each town shall be communicated as early as possible to the Secretary.

ART. 2. There shall be an Annual Meeting of the Society, at such times as the Trustees shall determine, at which all officers shall be elected. Twenty members at least shall be necessary to constitute a quorum for the transaction of business.

ART. 3. If at any meeting of the Society, or the Trustees, the President and Vice Presidents shall be absent, the members present may appoint one from among them to preside at such meeting.

ART. 4. The President, or, in case of his absence, either

*These meetings are held the last Tuesday of October, and the Trustees elected commence their duties at the November meeting of Trustees.

of the Vice Presidents, with the advice of the Trustees, may call a special meeting of the Society; or whenever a written application, with the reason assigned therefore, shall be made by any twelve members of the Society, to the Presidents and Trustees, they shall call such meeting.

ART. 5. The meetings of the Trustees shall be held at such time and place as they shall from time to time agree upon; seven of whom with the presiding officer shall make a quorum.

ART. 6. The Trustees shall regulate all the concerns of the Society, during the intervals of its meetings; propose such objects of improvement to the attention of the public, publish such communications, and offer premiums in such form and value as they think proper (provided the premiums offered do not exceed the funds of the Society); and shall lay before the Society, at each of its meetings, a statement of their proceedings and of the communications made to them.

ART. 7. The Secretary shall take minutes of all the votes and proceedings of the Society and of the Trustees, and enter them in separate books; and shall record all such communications as the Trustees shall direct. He shall write and answer all letters relating to the business of the Society.

ART. 8. The Treasurer shall receive all monies due or payable to the Society, and all donations that may be made to it, for which he shall give duplicate receipts, one of which shall be lodged with the Secretary, who shall make a fair record thereof. The Treasurer shall from time to time pay out such monies as he shall have orders for from the Trustees; and shall annually, and whenever thereto required, render a fair account of all his receipts and payments to the Society or a committee thereof. He shall give bonds for the faithful discharge of his duty, in such sum as the Trustees shall direct, and with such sureties.

ART. 9. A committee shall be appointed annually by

the Trustees, to audit the Treasurer's accounts, who shall report to the Society; and the same being accepted, shall be entered by the Secretary in his books.

ART. 10. In case of death, resignation, incapacity, or removal out of the County, of the Secretary or of the Treasurer, the Trustees shall take charge of the official books, papers, and other effects, belonging to the office that may be vacated, and give receipts for the same; which books, papers, etc., they may deliver to some person whom they may appoint to fill the office until the next meeting of the Society, at which time there shall be a new choice.

ART. 11. *Any citizen of the County may become a member of the Society, by paying the sum of THREE DOLLARS to increase the permanent fund of the institution.

ART. 12. A committee shall be raised from time to time, to solicit and receive subscriptions for raising a fund for encouraging the noblest of pursuits, the Agriculture of our country; the same to be sacredly appropriated to that purpose.

ART. 13. All ordained ministers of the Gospel who reside within the County, shall be admitted honorary members of the Society.

ART. 14. In addition to the usual number of Trustees annually elected, the past Presidents of the Society shall be honorary members of the Board of Trustees.

ART. 15. The foregoing constitution may be amended by a proposition of the amendment in writing by a member at a regular meeting; the same to lie over for the action at the next annual meeting of the Society.

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*Members will receive from the Secretary a "certificate of membership." No fines or assessments are ever imposed. Members are entitled to vote in all its transactions, with free use of the Library and a copy of the printed "Transactions" each year.

A premium of six dollars is now offered to the resident of the County obtaining the largest number of new members during the year ending Nov. 1.

OFFICERS OF THE SOCIETY

FOR 1891-92.

PRESIDENT.

FRANCIS H. APPLETON, of Peabody.

VICE PRESIDENTS.

JAMES J. H. GREGORY, of Marblehead.
JAMES P. KING, of Peabody.
OLIVER S. BUTLER, of Georgetown.
AARON LOW, of Essex.

SECRETARY.

JOHN M. DANFORTH, of Lynnfield.

TREASURER.

GILBERT L. STREETER, of Salem.

HONORARY TRUSTEES.

JOSEPH HOW, of Methuen.
BENJAMIN P. WARE, of Marblehead.

DELEGATE TO THE STATE BOARD OF AGRICULTURE.

BENJAMIN P. WARE, of Marblehead.

TRUSTEES.

Charles C. Blunt, Andover.	Wm. H. Allen, Manchester.
Edmund Gale, Amesbury.	Geo. B. Bradley, Methuen.
John W. Lovett, Beverly.	Geo. W. Sargent, Merrimac.
J. W. Chadwick, Boxford.	Hiram A. Stiles, Middleton.

S. W. Hopkinson, Bradford.
Charles H. Preston, Danvers.
Elias Andrews, Essex.
Sherman Nelson, Georgetown.
A. F. Harvey, Gloucester.
Edw. Harrington, Groveland.
Alvin Smith, Hamilton.
Thomas Sanders, Haverhill.
W. F. Kinsman, Ipswich.
H. G. Herrick, Lawrence.
Asa T. Newhall, Lynn.
John H. Perkins, Lynnfield.
Wm. S. Phillips, jr., Marblh'd.
William D. Hodges, Nahant.
B. F. Stanley, Newburyport.
Edward Kent, Newbury.
J. D. W. French, N. Andover.
N. M. Quint, Peabody.
Story D. Pool, Rockport.
Frank P. Todd, Rowley.
Henry A. Hale, Salem.
Wm. H. Greenleaf, Salisbury.
Samuel Hawkes, Saugus.
David Warren, Swampscott.
Eugene L. Wildes, Topsfield.
Henry Hobbs, Wenham.
William P. Bailey, West Newbury.

NEW MEMBERS.

Milo H. Gould, Andover.
J. Warren Moor, Andover.
Henry McLawlin, Andover.
F. H. Foster, Andover.
Alfred G. Playdon, Andover.
Edw. H. Appleton, Beverly.
Wm. Caleb Loring, Beverly.
Byron G. Kimball, Bradford.
J. Webb Barton, Danvers.
George P. Low, Essex.
Chas. W. Nelson, Georget'wn.
Benj. F. Brickett, Haverhill.
Wm. S. Messerve, Haverhill.
Wm. H. Moody, Haverhill.
Warren C. Allyn, Lawrence.
M. C. Austin, Lawrence.
Charles U. Bell, Lawrence.
F. J. Ball, Lawrence.
Albert C. Butler, Lawrence.
Adolph G. Boehm, Lawrence.
Geo. W. Colburn, Lawrence.
William Oswald, Lawrence.
Wm. R. Pedrick, Lawrence.
H. B. Robinson, Lawrence.
Joseph Ruht, Lawrence.
Edwin M. Sanborn, Lawrence.
Wm. H. Sylvester, Lawrence.
Caleb Saunders, Lawrence.
A. W. Stearns, Lawrence.
A. E. Sargent, Lawrence.
Jas. R. Simpson, Lawrence.
J. J. Stanley, Lawrence.
N. S. S. Tompkins, Lawrence.
R. H. Tewksbury, Lawrence.
C. C. Talbot, Lawrence.
Byron Truell, Lawrence.
H. K. Webster, Lawrence.
Gilman P. Wiggin, Lawrence.
Cora M. Wardsworth, Law'ce.
Henry S. Wilson, Lawrence.
Chas. S. Hanks, Manchester.
Isaac C. Brown, Methuen.

Charles Clarke, Lawrence.	Michael Dwyer, Methuen.
Maurice K. Curran, Lawrence.	C. H. Hall, Methuen.
Arthur W. Dyer, Lawrence.	Fred A. Russell, Methuen.
C. A. DeCourtney, Lawrence.	Addison P. Russell, Methuen.
George Ford, Lawrence.	Leverett Swan, Methuen.
John Farrell, Lawrence.	Chas. M. Sawyer, Methuen.
John F. Finn, Lawrence.	William D. Hodges, Nahant.
Wm. Fitzgerald, Lawrence.	Herbert F. Otis, Nahant.
Patrick Ford, Lawrence.	Geo. L. Averill, No. Andover.
William H. Gile, Lawrence.	Lewis Albegett, No. Andover.
Dyer S. Hall, Lawrence.	Amos D. Carlton, No. Andov'r.
Joseph Jackson, Lawrence.	Walter H. Hayes, No. Andov'r.
George S. Jenkins, Lawrence.	Humprey P. Bray, Rockport.
William S. Jewett, Lawrence.	Lewis E. Nickerson, Rockp't.
George E. Kline, Lawrence.	George W. Tufts, Rockport.
G. H. Kittredge, Lawrence.	Thaddeus Hale, Rowley.
W. O. Mahoney, Lawrence.	William A. Horton, Salem.
L. C. Moore, Lawrence.	Geo. E. Littlefield, Salisbury.
Patrick McCarthy, Lawrence.	John B. Faxon, Saugus.
John K. Norwood, Lawrence.	Lewis W. Hawkes, Saugus.

CHANGES REPORTED BY TRUSTEES IN 1891.

S. H. Jones, Danvers, from Middleton.
John R. Rollins, Derry, N. H., from Lawrence.
Israel H. Cole, Lynn, from Gloucester.
Stephen Dodd, Rockport, from Gloucester.
Frank J. Bradley, Haverhill, from Methuen.
Nathaniel Shatswell, Washington, D. C., from Ipswich.
C. U. Burbank, Alfred, Me., from Amesbury.
B. G. Ladd, West Newbury, from Bradford.
Horatio Bodge, Peabody, from Danvers.
Edward L. Hill, Templeton, from Danvers.
Ransom F. McCrillis, Salem from Danvers.
George S. Perry, Brattleboro, Vt., from Danvers.
Samuel S. Pratt, Revere, from Danvers.
Alfred M. Trask, Brockton, from Danvers.

Francis Marsh, Danvers, from Peabody.
Edgar Bliss, Beverly, from Salem.

CORRECTIONS OF 1890 LIST.

Humphrey B. Bray, Rockport, should be Humphrey P. Bray.

James B. Merriden, Rockport, should be James P. Merridew.

List of Premiums Awarded in 1891.

FAT CATTLE.

James C. Poor, No. Andover, for oxen, first premium, $8 00
Daniel A. Carlton, No. Andover, for oxen, second premium, 6 00
J. P. Little, Amesbury, third premium, 3 00

BULLS.

W. F. Kinsman, Ipswich, Jersey, first premium, 4 00
J. D. W. French, No. Andover, best bull with 5 of his stock, first premium, 10 00
J. D. W. French, No. Andover, Ayshire, first premium, 8 00
J. D. W. French, No. Andover, bull calf, first premium, 2 00
Shattuck Brothers, No. Andover, Holstein, first premium, 8 00
W. A. Russell, No. Andover, Holstein, second premium, 4 00
James C. Poor, No. Andover, Holstein calf, first premium, 2 00
E. C. Little, Haverhill, Holstein, first premium, 4 00
F. H. Foster, Andover, Guernsey, first premium, 4 00

MILCH COWS.

Leverett Swan, Methuen, short horn, first premium, 10 00
J. D. W. French, No. Andover, Guernsey, first premium, 10 00
J. D. W. French, No. Andover, Ayshire, first premium, 10 00
J. D. W. French, No. Andover, Ayshire, second premium, 4 00
James C. Poor, No. Andover, Holstein, first premium, 10 00
James C. Poor, No. Andover, most milk for twenty days, Holstein, first premium, 10 00
J. D. W. French, No. Andover, grade, first premium, 10 00
Wm. A. Russell, No Andover, for best cow of any age or breed, Holstein cow, "Queen Ruiter," first premium, Diploma and 15 00

HERDS OF MILCH COWS.

Leverett Swan, Methuen, five grade cows, first premium, 18 00
J. D. W. French, No. Andover, Ayshires, second premium, 12 00
Wm. A. Russell, No. Andover, greatest produce of milk, Holsteins, Diploma and 15 00

HEIFERS—PURE BRED.

J. F. Gulliver, Andover, Jersey, first premium, 9 00
M. H. Conner, West Newbury, Ayshire, second premium, 4 00
J. F. Gulliver, Andover, Jersey calf, first premium, 5 00
J. D. W. French, No. Andover, Ayshire, first premium, 9 00
J. D. W. French, No. Andover, Ayshire, second premium, 6 00
J. D. W. French, No. Andover, Ayshire, first premium, 5 00
J. D. W. French, No. Andover, Ayshire, first premium, 5 00
J. D. W. French, No. Andover, Ayshire, second premium, 4 00
J. D. W. French, No. Andover, Ayshire calf, first premium, 5 00
Wm. A. Russell, No. Andover, Holstein, first premium, 5 00
Wm. A. Russell, No. Andover, Holstein, second premium, 4 00
Wm. A. Russell, No. Andover, Holstein, second premium, 6 00
James C. Poor, No. Andover, Holstein, first premium, 9 00
James C. Poor, No. Andover, Holstein, first premium, 5 00
E. C. Little, Haverhill, Jersey, second premium, 6 00
E. C. Little, Haverhill, Jersey, first premium, 5 00
E. C. Little, Haverhill, Jersey, second premium, 4 00
E. C. Little, Haverhill, Holstein, second premium, 4 00
F. H. Foster, Andover, Guernsey, first premium, 5 00

HEIFERS—NATIVE OR GRADE.

D. M. Ayer, Methuen, grade Holstein, first premium, 5 00
George Ripley, Andover, grade Jersey, first premium, 5 00
S. H. Bailey, Andover, grade Jersey, first premium, 5 00
L. Albegett, No. Andover, grade Ayshire, first premium, 9 00
W. S. Hughs, No. Andover, grade Ayshire, second premium, 4 00
John F. Higgins, Middleton, native calf, second premium, 4 00
James J. Abbott, No. Andover, grade Jersey, second premium, 4 00

WORKING OXEN AND STEERS.

J. P. Little, Amesbury, working oxen, first premium, 12 00
Wm. P. Christopher, Middleton, for oxen, second premium, 10 00
A. W. Peabody, Middleton, for oxen, third premium, 8 00
B. H. Farnham, No. Andover, for steers, first premium, 10 00
James C. Poor, No. Andover, for steers, second premium, 6 00

STEERS.

B. W. Farnham, No. Andover, 3 years old, first premium, 8 00
B. H. Farnham, No. Andover, 3 years old, second premium, 6 00
Wm. P. Christopher, Middleton, 2 years old, second premium, 5 00

STALLIONS FOR DRIVING.

J. G. McAllister, Lawrence, for "Essex Hambletonian," Diploma and 15 00
Wm. S. Messerve, Haverhill, for "Little Phil," first premium, 10 00
Chas. A. Lunt, Newbury, for "Gladstone," second premium, 6 00

BROOD MARES—FARM PURPOSES.

E. C. Little, Haverhill, for gray mare, first premium, 10 00
B. H. Farnham, No. Andover, for gray mare, second premium, 6 00
John H. George, Methuen, for sorrel mare, third premium, 4 00

BROOD MARES FOR DRIVING PURPOSES.

Peter Holt, jr., No. Andover, first premium, 10 00
J. G. McAllister, Lawrence, second premium, 6 00
Towne Brothers, Haverhill, third premium, 4 00

FAMILY HORSES.

M. C. Andrews, Andover, mare "Princess," first premium, 10 00
M. H. Connor, West Newbury, mare "Nelly," second premium, 6 00
Wm. K. Cole, Boxford, mare "Beauty," third premium, 4 00

GENTS' DRIVING HORSES.

Byron G. Kimball, Bradford, horse "Starlight," first premium, 10 00
Charles Clarke, Lawrence, mare "Milley," second premium, 6 00
M. C. Andrews, Andover, mare, "Cyclone," third premium, 4 00

SINGLE FARM HORSES.

John H. Perkins, Lynnfield, first premium, 10 00

Moses H. Poor, West Newbury, second premium, 6 00
James C. Poor, No. Andover, third premium, 4 00
Fred Symonds, No. Andover, first premium, 10 00
W. J. Currier, Danvers, second premium, 6 00

PAIRS OF FARM HORSES.

Isaac C. Brown, Methuen, first premium, 10 00
A. M. Robinson, No. Andover, second premium, 8 00
M. H. Connor, West Newbury, first premium, 10 00
J. Horace Nason, Boxford, second premium, 8 00

COLTS FOR FARM WORK.

M. H. Connor, West Newbury, 4 year old colt, first premium, 8 00
M. Dwyer, Methuen, 2 year old colt, first premium, 8 00
M. H. Connor, West Newbury, 2 year old colt, second premium, 5 00
R. T. Jaques, Newbury, 1 year old colt, first premium, 5 00
H. G. Meade, No. Andover, 1 year old colt, second premium, 3 00

COLTS FOR DRIVING.

Edwin Bates, Lynn, 4 year old colt, first premium, 8 00
L. F. Moulton, Lawrence, 4 year old colt, second premium, 5 00
Byron G. Kimball, Bradford, 3 year old colt, first premium, 6 00
C. Moynihan, Newbury, 3 year old colt, second premium, 3 00
J. G. McAllister, Lawrence, 2 year old colt, first premium, 8 00
W. H. & L. J. Tufts, Middleton, 2 year old colt, second premium, 5 00
Benj. Pearson, jr., Newbury, 2 year old colt, third premium, 3 00
J. E. Bicknell, jr., Lawrence, yearling colt, first premium, 5 00
J. G. McAllister, Lawrence, yearling colt, second premium, 3 00

SWINE.

J. G. McAllister, Lawrence, Chester white boar, first premium, 8 00
J. G. McAllister, Lawrence, Chester white sow, first premium, 8 00
Alfred G. Playdon, Andover, sow and pigs, first premium, 8 00

Geo. E. Littlefield, Salisbury, Berkshire boar, first premium,	8 00
Geo. E. Littlefield, Salisbury, Chester white pigs, second premium,	5 00
Geo. E. Littlefield, Salisbury, Chester white sow, second premium,	5 00
Geo. E. Littlefield, Salisbury, Berkshire sow, first premium,	8 00
James C. Poor, No. Andover, grade sow, first premium,	8 00
M. B. Chesley, Amesbury, Chester white sow, first premium,	8 00
E. C. Little, Haverhill, 10 pigs, second premium,	5 00
E. C. Little, Haverhill, Chester white boar, second premium,	5 00
J. D. W. French, No. Andover, small Yorkshire boar, first premium,	8 00

SHEEP.

J. D. W. French, No. Andover, 10 ewes, first premium,	10 00
J. D. W. French, No. Andover, buck, first premium,	8 00
C. H. Tenney, Methuen, 12 lambs, first premium,	6 00

PLOUGHING WITH DOUBLE TEAM.

J. P. Little, Amesbury, first premium,	10 00
B. H. Farnham, No. Andover, second premium,	8 00

PLOUGHING WITH SINGLE TEAM.

Wm. P. Christopher, Middleton, first premium,	10 00

PLOUGHING SWIVEL PLOUGH, DOUBLE TEAM.

Farnham & Wilkins, Topsfield, first premium,	10 00

SINGLE OX TEAM.

A. W. Peabody, Middleton, first premium,	10 00

HORSES, SWIVEL PLOUGH.

A. M. Robinson, No. Andover, first premium,	10 00
I. C. Brown, Methuen, second premium,	8 00

PLOUGHING WITH THREE HORSES.

M. H. Connor, West Newbury, first premium,	10 00

PLOUGHING WITH SULKY PLOUGH.

F. A. Russell, Methuen, first premium,	10 00
Geo. E. Kline, Lawrence, second premium,	8 00

IMPROVING WASTE LAND.

C. K. Ordway & Son, West Newbury, first premium, 15 00
C. Moynihan, Newbury, second premium, 10 00

GRAIN CROPS.

C. K. Ordway & Son, West Newbury, crop of oats, first premium, 10 00
Henry M. Killam, Boxford, crop of corn, first premium, 10 00
C. K. Ordway & Son, West Newbury, crop of corn, second premium, 5 00
Abel Stickney, Groveland, crop of hay, first premium, 10 00
J. M. Pearl, Boxford, crop of barley, first premium, 10 00

ROOT CROPS.

Chas. C. Blunt, Andover, crop of parsnips, first premium, 10 00
John H. George, Methuen, crop of onions, first premium, 10 00
Henry A. Hayward, Andover, crop of cabbage, first premium, 10 00
James Manning, Topsfield, crop of onions, second premium, 5 00
C. Moynihan, Newbury, crop of ruta baga turnips, first premium, 10 00
David Warren, Swampscott, crop of squash, first premium, 10 00

SMALL FRUITS.

Geo. J. Pierce, West Newbury, strawberry crop, first premium, 10 00
Daniel Stiles, No. Andover, blackberry crop, first premium, 10 00

NEW MEMBERS.

Morris N. Howe, Lawrence, for most new members, premium, 6 00

ESSAYS AND REPORTS.

George A. Rogers, North Andover, essay, first premium, 15 00
Dr. J. W. Goodell, Lynn, essay, "Grape culture," second premium, 10 00
M. Sumner Perkins, Danvers, essay, third premium, 8 00
O. S. Butler, Georgetown, report, first premium, 10 00

OTHER AWARDS.

Awarded by Committee on				Granges,	110 00
"	"	"	"	Special Premium,	30 00
"	"	"	"	Poultry,	39 00
"	"	"	"	Harrows,	18 00
"	"	"	"	Agricultural Implements,	58 00
"	"	"	"	Dairy,	18 00
"	"	"	"	Carriages,	12 00
"	"	"	"	Bread and Canned Fruit, etc.,	22 50
"	"	"	"	Pears,	60 50
"	"	"	"	Apples,	76 00
"	"	"	"	Peaches, Grapes, etc.,	49 00
"	"	"	"	Plants and Flowers,	42 00
"	"	"	"	Vegetables,	173 00
"	"	"	"	Forest Trees,	10 00
"	"	"	"	Grain and Seed,	24 00
"	"	"	"	Counterpanes and Afghans,	22 75
"	"	"	"	Carpets and Rugs,	18 00
"	"	"	"	Manufactures from Leather,	12 00
"	"	"	"	Fancy Work,	32 25
"	"	"	"	Art Work,	50 00
"	"	"	"	Children's Work,	6 75
"	"	"	"	Manuf. and General Mdse.,	20 00

RECAPITULATION.

Awarded for Improving Waste Land,	$25 00	
" " Ploughing,	94 00	
		$119 00
FARM STOCK.		
Awarded for Fat Cattle,	17 00	
" " Bulls,	46 00	
" " Milch Cows,	79 00	
" " Herds of Milch Cows,	45 00	
" " Heifers,	131 00	
" " Heifer Calves,	10 00	
" " Working Oxen and Steers,	46 00	
" " Steers,	19 00	
" " Horses,	258 00	
" " Swine,	84 00	
" " Sheep,	24 00	
" " Poultry,	39 00	
" " Bees, Hives and Honey,	5 00	
		803 00
FIELD AND EXPERIMENTAL CROPS.		
Awarded for Grain Crops,	45 00	
" " Root Crops,	55 00	
" " Fruit Crops,	20 00	
		120 00
FARM AND GARDEN PRODUCTS.		
Awarded for Grain and Seed,	24 00	
" " Vegetables,	173 00	
" " Fruits,	185 50	
" " Plants and Flowers,	42 00	
		424 50
DAIRY PRODUCT.		
Awarded for Butter,	18 00	
" " Special Premium,	30 00	
		48 00

DOMESTIC MANUFACTURES.

Awarded for Bread, Canned Fruits, etc.,	22 50	
" " Counterpanes and Afghans,	22 75	
" " Carpetings and Rugs,	18 00	
" " Articles Manuf. from Leather,	12 00	
" " Manufactures and General Mdse.	20 00	
" " Fancy Work,	32 25	
" " Work of Art,	50 00	
" " Children's Work,	6 75	
		184 25

MISCELLANEOUS.

Awarded for Agricultural Implements,	76 00	
" " Carriages,	12 00	
" " Forest Trees,	10 00	
" " Granges,	110 00	
" " New Members,	6 00	
" " Essays, Reports, etc.,	43 00	
		257 00
TOTAL,		$1,955 75

The amount of $1,955.75 was awarded to 389 individuals and firms in 31 different cities and towns in the county as follows, viz:

Amesbury,	$60 50	Merrimac,	$2 25
Andover,	150 50	Methuen,	190 50
Beverly,	6 00	Middleton,	70 00
Boxford,	74 50	Marblehead,	9 00
Bradford,	21 75	Newbury,	97 00
Danvers,	59 25	Newburyport,	6 00
Essex,	10 00	North Andover,	440 00
Georgetown,	11 00	Peabody,	28 50
Groveland,	26 25	Rockport,	3 00
Hamilton,	8 00	Rowley,	19 00
Haverhill,	98 25	Salem,	2 00
Ipswich,	4 00	Salisbury,	26 00
Lawrence,	268 50	Saugus,	10 00
Lynn,	69 00	Swampscott,	30 00
Lynnfield,	13 00	Topsfield,	20 00

West Newbury, $123.

FINANCIAL STATEMENT.

Receipts for Admission to Hall,	$1642 00	
" " " " Dinner,	139 00	
" " Grounds for Caterers, Swings, etc.,	149 25	
		$1930 25
Expenses, including Tent-hire, Halls and Dinner,		1095 52
Amount paid Treasurer,		$834 73

1892.

PREMIUM LIST OF

Essex Agricultural Society,

FOR THE

Seventy-Second Annual Cattle Show and Fair,

To be held September 27 and 28, in Lawrence.

Duties of Trustees.

The Trustee of each town is instructed to see the several members of Committees in his town previous to the Show, and urge upon them the importance of attending to their duties. Also impress upon exhibitors from localities near to the Exhibition, the importance of entering their exhibits the afternoon and evening of Monday, in fairness to those from a distance, who are obliged to come Tuesday.

To be prompt at the meeting in June for filling Committees, and at the meeting of the Society for filling vacancies in committees on the first day of the Exhibition, making sure that the names proposed at those meetings are of persons who will serve.

Duties of Committees.

Committees on live stock and articles exhibited on the Fair Grounds should appear at the Secretary's office on the grounds, at one o'clock, punctually, on the first day of the exhibition, and there organize, take the books of entry, and proceed at once to business. Committees in hall, should take the books of entry from the Superintendent, promptly after the entries close.

Full reports of awards by committees, on the blanks furnished by the Secretary, to be signed by all the members acting on the same, are required of each committee.

Three members of any committee consisting of more than that number are authorized to act.

No member of the Society shall act on any committee of which he is an exhibitor in the same class.

The Diploma of the Society being considered the highest premium that can be awarded, no committee is authorized to award it, except for animals and articles *of special merit*, deserving of indorsement and recommendation by the Society.

No committee is authorized to award gratuities, except the committee on agricultural implements, carriages, bread, honey, and canned fruits, domestic manufactures, fruits, vegetables in hall, and flowers; or any premium, unless the rules of the Society have been strictly complied with. Neither shall they award premiums or gratuities in excess of the amount appropriated.

No gratuity is to be awarded of less than fifty cents.

The several committees are requested to affix premium cards, and also on animals, blue, white, and red printed premium ribbons (which may be had of the Secretary or assistant on the grounds and at the hall), for the several animals or articles designating the grade of premium awarded each, and the name of the person to whom awarded, and special care should be taken that the cards issued correspond with the awards in their report to the Society.

The reports of awards of premiums on ploughing and on animals and articles exhibited at the Show, must be delivered promptly to the Secretary for announcement on Wednesday.

The Society offers liberal premiums for the best reports of committees; and the chairmen of the several committees are requested to present to the Secretary a full report explanatory of the opinions of the committee on the matter referred to them, within two weeks after the awards are made at the Show, for publication in the Transactions.*

Reports on farms, crops, etc., to be presented previous to the meeting of the Trustees in November.

Any member of a committee who cannot serve on the same *is requested to give notice* to the Secretary, *before the Show*, so that the vacancy may be filled.

Each member of the several committees will receive a ticket of admission to the hall of exhibition, on application to the Secretary.

*Chairmen of committees will please notice this request.

General Rules.

Competitors are requested to carefully read the rules and premium list before making entries.

Claims (entries) for premiums to be awarded at the Exhibition on the Fair Grounds, must be entered with the Secretary of the Society, or his agent, on or before 10 o'clock A. M., and in the Exhibition Hall, on or before 11 A. M., of the first day thereof.

All claims (entries) for premiums on Fair Grounds, must be handed or forwarded to the Secretary or his agent, in writing, previous to the day of the Fair, if possible, or on or before 10 o'clock A. M., of the first day thereof.

Any person *not a member of the Society*, awarded seven dollars and upwards, shall receive a certificate of membership, for which three dollars of his award will be taken to increase the funds of the Society.

Diplomas awarded will be delivered and premiums paid, to the person to whom the premium or gratuity is awarded, or an agent duly authorized, on application to the Treasurer, at First National Bank, Salem, on and after the fourth Monday of November.

All premiums and gratuities awarded, the payment of which is not demanded of the Treasurer on or before the first day of September next succeeding the Exhibition, will be considered as given to increase the funds of the Society.

In all cases the reports of award of premiums and gratuities made by the several committees and adopted by the Society shall be final. *Committees should see that the premium cards issued, correspond with the premiums and gratuities awarded in their reports.*

No person shall be entitled to receive a premium, unless he complies with the conditions on which the premiums are offered, and by proper entry as required, gives notice of his intention to compete for the same; and committees are instructed to award no premium unless the animal or article offered is worthy.

No animal or object that is entered in one class, with one committee shall be entered in another class, except town teams, fat cattle, working oxen, working steers, and farm horses, which may be entered for ploughing, and milch cows, which may be entered with a herd.

In regard to all subjects for which premiums are offered it is to be distinctly understood that the Trustees reserve to themselves the right of judging the quality of the animal or article offered; and that no premium will be awarded unless the objects of them are of decidedly superior quality.

Pure Bred Animals, defined by the State Board of Agriculture.

The *proof* that an animal is so bred should be a record of the animal or its ancestors, as recorded in some herd book, recognized by leading breeders and the public generally, as complete and authentic.

Standards adopted:—American Jersey C. C. Register and American Jersey Herd Book, Ayrshire Record and Holstein Herd Book.

Premiums to be Awarded at the Show.

The Committees will take notice that no premium will be awarded unless the animals or objects are of a decidedly superior quality.

DIPLOMAS may be awarded for ANIMALS OR ARTICLES of *special* merit, in all departments of the Fair.

Cattle and other Farm Stock

TO BE ENTERED IN THE NAME OF THEIR REAL OWNER.

All animals, to be eligible to a premium, shall have been raised by the owner within the County, or owned by the exhibitor within the County, four months previous to the date of Exhibition, except Working Oxen, and Working Steers.

All animals, whether teams for ploughing, or animals entered for premium or exhibition, will be fed during the Exhibition, and longer when they are of necessity prevented from leaving, at the expense of the Society.

FAT CATTLE.

Fat cattle, fatted within the County, regard being had to manner of feeding and the expense thereof, all of which shall be stated by the exhibitor in writing, and returned to the Secretary, with committee's report.

For Pairs of Fat Cattle, premiums, $8, 6, 3
For Fat Cows, premiums, $7, 5

BULLS.

*Ayrshire, Jersey, Short Horn, Devon, Holstein, Guernsey or of any other recognized breed, for each breed.

Two years old and upwards, premiums, $8, 4
Under two years, for each breed, $4, 3
Bull Calves under one year old, premium for each breed, $2

BULLS OF ANY AGE OR BREED.

For the best bull of any age or breed, with five of his stock not less than one year old, quality and condition to be taken into account, and especially the adaptability of the animal to the agriculture of the County. Diploma and $10

NOTE.—Competitors are required to give a written statement of pedigree, and committees are requested to be particular in this respect, and return them to the Secretary with report.

MILCH COWS.

For the best Milch Cow any age or breed, with satisfactory record in quarts or pounds by her daily yield of milk for one or more years, premium, $15

For Milch Cows, either Foreign, Native or Grade, not less than four nor more than ten years old, with satisfactory evidence as to quantity and quality of milk, either by weight or measure, during the evening or morning of the first and last ten days of any month, premiums, $10, 4

Milch Cows, Ayrshire, Jersey, Devon, Short Horn, Holstein, Guernsey, or any other recognized breed, four years old and upwards, premiums, for each breed, $10, 4

For Native or Grade Cows, four years old and upwards, premiums, $10, 4

For the Cows that make the most butter in any single week from June 1st to September 15th, premiums, $10, 4

NOTE.—A written statement will be required of the age and breed of all Milch Cows entered, and time they dropped their last calf, and when they will next calve, the kind, quality and quantity of their food during the season, and the manner of their feeding, which statement is to be returned to the Secretary with Committee's report.

HERDS OF MILCH COWS.

For herds of Milch Cows, not less than five in number, to be exhibited at the Show, and a correct statement of manner of keeping and yield for one year preceding the Show, premiums, $18, 12

For the greatest produce of milk on any farm, in proportion to

the number of cows producing it, not less than four, from April 1, 1889, to April 1, 1890, statement to be made of the exchanges made, manner, and expense of food, use made of milk, and such other facts as will illustrate the entire management, special regard being had to the mode in which the account is kept, premium, Diploma, and $15

NOTE.—The above mentioned statements are to be returned to the Secretary with Committee's report. The Committee can accept statements dating from January 1st, preceding the Show.

HEIFERS.

FIRST CLASS.—Ayrshire, Jersey, Short Horn, Devon, Holstein, Guernsey, or any other recognized breed, under four years old, in milk, premiums, for each breed, $9, 6

Two year olds of each breed, that have never calved, premiums, $5, 4

One year olds of each breed, premiums, $5, 4

Heifer Calves, under one year, premiums for each breed. $5, 4

SECOND CLASS.—Native or Grade Milch, under four years old, premiums, $9, 6

Two year olds, that have never calved, premiums, $5, 4

One year olds and less than two, premiums, $5, 4

Heifer calves, Native or Grade, under one year old, premiums, $5, 4

WORKING OXEN AND STEERS.

Stags excluded. For pairs of Working Oxen under eight and not less than five years old, taking into view their size, power, quality and training, premiums, $12, 10, 8

For pairs of Working Steers, four years old, to be entered in the name of the owner, premiums, $10, 6

NOTE.—The Committee are required to consider the quality and shape of the cattle as well as their working capacity. The training of working oxen and steers will be tested by trial on a cart or wagon containing a load weighing two tons for oxen, and 3000 pounds for steers. ☞At the time of entry a certificate of the weight of the cattle must be filed with the Secretary.

TOWN TEAMS.

For Town Teams of Oxen, ten yoke or more in a team, premiums, $20, 12

For Town Teams of Horses, ten or more pairs in a team, premiums, $20, 12

STEERS.

For pairs of three year old Steers, broken to the yoke, premiums, $8, 6

For pairs of two year old Steers, premiums, $6, 5

For pairs of yearling Steers, premiums, $5, 4

For pairs of Steer Calves, premiums, $4, 2

STALLIONS.

FIRST CLASS.—For Stallions for Farm and Draft purposes, four years old and upwards, diploma or premiums, $10, 6, 4

For Stallions for Farm and Draft purposes, three years old, premiums, $8, 5

For best Stallion of any age, and five colts of his stock, not less than one year old, quality and condition to be taken into account, Diploma and $15

SECOND CLASS.—For Stallions for Driving purposes, four years old and upwards, premiums, $10, 6, 4

For Stallions for Driving purposes, three years old, premiums, $8, 5

For best Stallion of any age and five colts of his stock, not less than one year old, quality and condition to be taken into account, Diploma and $15

NOTE.—No Stallion will be entitled to a premium unless free from all apparent defects capable of being transmitted. All Stallions entered in either class must have been owned by the exhibitor four months previous to the exhibition.

BROOD MARES.

FIRST CLASS.—For Brood Mares for Farm and Draft purposes, with their foal not more than eight months old, by their side, premiums, $10, 6, 4

SECOND CLASS.—For Brood Mares for Driving purposes, with their foal not more than eight months old, by their side, premiums, $10, 6, 4

NOTE.—No brood mare will be entitled to a premium unless free from all apparent defects capable of being transmitted.

FAMILY HORSES.

For Family Horses, premiums, $10, 6, 4

NOTE.—No horse will receive a premium unless free from all unsoundness.

GENTLEMEN'S DRIVING HORSES.

For Gentlemen's Driving Horses, premiums, $10, 6, 4

FARM HORSES.

For Farm Horses, weighing 1200 lbs. and over, premiums, $10, 6, 4

For Farm Horses weighing less than 1200 lbs., premiums, $10, 6, 4

NOTE.—No horse will be allowed except those actually used on farms, whether the owner has a farm or not. The weight of load to be used in trial of Farm Horses is to be fixed upon by the committee of arrangements for drafting, the difference in the load for horses of 1200 lbs. and over, and those under 1200 lbs. to be 1000 lbs., and between the two classes of pairs 2000 lbs. No obstruction shall be placed either before or behind the wheels in trials of Draft horses of either class. But wheels to be trigged to hold the load when they stop on a hill. If this rule is not complied with, the premiums shall be withheld.

PAIRS OF FARM HORSES.

FIRST CLASS.—For pairs of Farm Horses, weighing 2500 lbs. and upwards, (see above note) premiums, $10, 8

SECOND CLASS.—For pairs of Farm Horses, weighing less than 2500 lbs. (see above note) premiums, $10, 8

COLTS FOR DRAFT PURPOSES.

First Class.—For Mare or Gelding four year old Colts, premiums, $8, 5, 3
For Mare or Gelding three year old Colts, premiums, $6, 3
Second Class.—For Stallion, Gelding, or Mare, two year old Colts, premiums, $8, 5, 3
For Stallion, Gelding or Mare, yearling Colts, premiums, $5, 3

COLTS FOR GENERAL PURPOSES.

First Class.—For Mare or Gelding four year old Colts, premiums, $8, 5, 3
For Mare or Gelding three year old Colts, premiums, $6, 3
Second Class.—For Stallion, Gelding or Mare, two year old Colts, premiums, $8, 5, 3
For Stallion, Gelding or Mare yearling Colts, premiums, $5, 3

SWINE.

First Class.—Large breeds, viz.: Cheshire, Berkshire, Chester County White, Poland China, Large Yorkshire, and any other breed or grade weighing more than 300 lbs. at maturity.
For Boars, premiums, $8, 5
For Breeding Sows, with their pigs by their side, premiums, $8, 5
For Litters of Weaned Pigs, not less than four, between two and four months old, premiums, $8, 5
Second Class.—Small breeds, such as Suffolk, Essex, Small Yorkshire, China, and any other breed or grade weighing less than 300 lbs. at maturity.
For Boars, premiums, $8, 5
For Breeding Sows, with their pigs by their side, premiums, $8, 5
For Litters of Weaned Pigs, not less than four, between two and four months old, premiums, $8, 5

SHEEP.

For flocks of Sheep not less than ten in number, premiums, $10, 6
For best Buck, premium. $8
For lots of Lambs, not less than four in number, between four and twelve months old, premiums, $6, 4

POULTRY.

For pairs of Fowls, Light Brahmas, Dark Brahmas, Buff Cochins, Partridge Cochins, Black Cochins, White Cochins, Plymouth Rocks, Dominiques, White Leghorns, Brown Leghorns, Dominique Leghorns, Black Spanish, Hamburgs, Polish, Games, Dorking, Bantams, Black, White and Mottled Javas, Wyandottes, White Wyandottes, Andalusian, Erminet, Langshangs, and Frizzle, and other recognized varieties, each variety, premiums, $2, 1

For pairs of Chickens of above varieties, premiums, $2, 1

For the best breeding pen of each variety—Diploma of the Society.

For the best pairs of Native Fowls, premiums, $2, 1

Pairs can be exhibited in "breeding pens," by marking the competing female (with a ribbon or colored string), which, with the male will form the pair.

For lots of Turkeys, and Alesbury, Rouen, Caouga, Pekin, White and Colored Muscovey, and Brazilian Ducks, and Toulouse, Emden, Brown China, and African Geese, premiums, $2, 1

For 10 or more Fowls exhibited, whether thoroughbreds, crossed or mixed, with an account for one year, showing cost and method of keeping, production and profit, premiums, $8, 6, 5

As above, with an account for six months, premiums, $5, 3, 2

For the best pair of Dressed Fowls, Chickens, Ducks and Geese, weight to be given, premium for each pair, $2

For the best 12 Eggs from Asiatic, American, Game, French and Spanish classes (Hamburgs, Polish, Dorkings to compete in the Spanish class), premium for each class, $1

Any exhibitor interfering with the Judges in the discharge of their duties or interfering with, or handling any specimen on exhibition, other than his own, shall forfeit all claim he may have in the premium list.

All breeds exhibited separately and to be judged by the rules of the "American Standard of Excellence."

For best exhibit of Poultry Appliances, $5

PLOUGHING.

GENERAL NOTE ON PLOUGHING.—Stags are excluded. Teams must be entered in the names of their owners, and only double ox-teams to have drivers. A team consisting of one pair of oxen and a horse will be considered a double team. The owners of separate teams may unite the same and be allowed to compete for premiums. The ploughmen and drivers must have been residents of the County at least three months before the exhibition. Those who intend to be competitors must give notice to reach the Secretary on or before Saturday previous to the show. The lands will be staked, but each ploughman will be required to strike out his own lands in the presence of the "Committee on Striking out Grounds for Ploughing," after half past nine o'clock on the morning of the trial. Ploughmen with land side ploughs are to back furrow three furrows on each side of the stakes set, the last furrow to be of the depth required in the class. Ploughmen with swivel ploughs to turn the outside of their furrow to the stakes on one side, and to finish one foot from the stake on the other. Committees to note and report the kind of plough used.

PLOUGHING WITH DOUBLE TEAMS.—One-eighth of an acre, at least eight inches deep, premiums, $10, 8, 6

PLOUGHING WITH SINGLE TEAMS.—One-eighth of an acre, at least six inches deep, premiums, $10, 8, 5

PLOUGHING WITH HORSES.—With any form of Plough, except Swivel, one-eighth of an acre, at least six inches deep, premiums, $10, 7, 5

PLOUGHING WITH THREE HORSES.—One-eighth of an acre, eight inches deep, without driver, premium, $10

Same with four horses, with driver, premium, $10

PLOUGHING WITH SWIVEL PLOUGH.—One-eighth of an acre, with double ox-teams, at least eight inches deep, premiums. $10, 8

Same with single ox-teams, at least six inches deep, premiums, $10, 8

Same with Horse Teams, consisting of two horses, ploughing at least six inches deep, premiums, $10, 8

PLOUGHING—SULKY PLOUGH.—For the best performances taking into account ease of draft, amount and quality of work, premiums. $10, 8

HARROWS.

For the best Harrow exhibited and its merits shown by actual test upon the ploughed ground, $10, 8

NOTE.—Entry must be made with the Secretary before the day of the trial with description of Harrow.

AGRICULTURAL IMPLEMENTS.

For the best collection of Implements and Machines (no article offered in *collection* will be entitled to a separate premium), Diploma and $10

Best Market Wagon, premium, $5
Best Farm Wagon, for one or two horses, premium, $3
Best Horse Cart, premium, $5
Best Hay, Straw, or Corn Cutter, premium, $1.50
Best Ox Yoke, complete, premium, $1.50
Best Fruit Evaporator, with sample of work, premium, $5
Best set of Horse Shoes, including those for over-reaching, interfering and stumbling horses, premium, $5

For implements not specified above, the Committee may at their discretion award $40.

No premium or gratuity will be awarded for any Mower, Horse Rake, Tedder, or other Machine or Implement, the merit of which can be known only by actual trial in the field; but manufacturers are invited to offer the same for exhibition and inspection.

CARRIAGES.

For carriages built in the County, and exhibited by the manufacturer, Diploma, and thirty dollars in gratuities, may be awarded by the Committee.

In Exhibition Hall.

Committees on articles exhibited in the hall should be especially careful that the premium or gratuity cards issued with the names, and sums awarded them, correspond with those in their reports to the Society.

Committees and Exhibitors will be governed by instructions, under heading of "Duties of Committee," "General Rules," "Premiums to be awarded at the Show," see first pages, and under "Fruit," "Domestic Manufactures," and "Flowers."

☞All Fruit, Flowers, Vegetables, and Domestic Manufactures, must be the Product of Essex County, to be entitled to a premium or gratuity.

DAIRY.

For specimens of Butter made on any farm within the County the present year, samples of not less than five pounds to be exhibited, with a full account of the process of making and management of the Butter, premiums. $8, 6, 4

For Specimens of New Milk Cheese, made on any farm in the County the present year, samples of not less than fifty pounds to be exhibited, with statement in writing of the method of making and preserving the same, premiums, $8, 6, 4

NOTE.—Each lot presented for premium and the statement accompanying it, must be numbered, but not marked so as to indicate the claimant; any public or known mark must be completely concealed; nor must the competitors be present at the examination.

To the person who shall furnish to the Society satisfactory evidence of the greatest quantity of Butter made from any quantity of milk, being the whole produce of any single cow, for the first week of June, July, August, and September next, stating the whole amount of Butter produced in each week, also the time when the cow dropped her last calf, and her feed and management all to be taken into account in making the award, premiums,

Diploma and $10, 5

NOTE.—The object in offering these last premiums is to elicit inquiry as to the value and quality of milk for the production of butter. As far as practicable it is desirable that the race and pedigree of the cow shall be given.

BREAD AND CANNED FRUIT.

For White Bread made of Wheat flour, premiums, $3, 2, 1

For bread made from Graham flour, premiums, $2, 1

For bread made from other grains, or other grains mixed with wheat, premiums, $1.50, 1

All bread, entered for premiums, to be in loaves weighing not less than one pound each, and to be not less than twenty-four hours old, with a full written statement over the signature and address of the maker, stating the kind of flour used, quantity of each ingredient, how mixed, and length of time kneaded and raised, and how long baked, *which statements on all premium bread are to be sent to the Secretary with report of the Committee for publication.*

For first and second best collection of Pickles, Preserved Fruits, and Jellies, made from products of the County, *when premiums are awarded, the method of making to be sent to the Secretary by the Committee, for publication*, premiums, $3, 2

For the first and second best five pounds of Dried Apples, grown and dried within the County, with statements of process used and amount of labor and time required in preparing and drying, *such statement on premium fruit to be given to the Secretary for publication*, premiums, $3, 2

In addition to the above, are placed in the hands of the Committee for gratuities on other articles entered in this department, products of this County deemed worthy. $5

BEES, HIVES AND HONEY.

For first and second best display of Bees, Hives and Apiarian Implements, accompanied with a written description of the bees,

hives, etc., number of hives in use and amount of surplus honey taken from them during the season, premiums, $5, 3

First and second best Honey, ten pounds in comb and one pound extracted, made in the County, with statement signed of kind of bees and hive, and time of year when honey was made, premiums, $3, 2

Fruit.

All fruit must be entered in the name of the grower before 11 o'clock on the first day of the exhibition, and each exhibitor must certify to the same on the Entry Book, or on lists of the varieties of each class of fruit, or be filed when entry is made. (Committees are not authorized to make awards to those who do not comply with this rule.)

Tables will be labelled in a *conspicuous manner* by the hall committee *before the entry of exhibitors*, with the names of fruit, for which premiums are offered, all others of same class fruit to be labelled miscellaneous. Exhibitors must place their several varieties of each class of fruit where indicated by such labels, or be considered by the committee as not competing for premium.

Plates of collections of fruit, when premiums are offered therefor, must be entered and placed by the exhibitor on the table assigned for the exhibit of collections of fruit.

To entitle exhibitors to receive premiums and gratuities awarded, they are required (when requested by the committee) to give information in regard to the culture of their fruit.

PEARS.

For best twelve specimens of the following varieties, which are recommended for cultivation in Essex County: Bartlett, Belle Lucrative, Bosc, Anjou, Angouleme, Dana's Hovey, Lawrence, Louise Bonne, Onondaga, Paradise d'Automne, Seckle, Sheldon, Urbaniste, Vicar, Comice, Howell, and Clairgeau, each, premium, $3

Doyenne d'Ete, Gifford and Clapp's Favorite (ripening early), are recommended for cultivation, but no premium is offered.

For each dish of twelve best specimens of any other varieties, deemed worthy by the committee, premium, $1.50

For best collection of Pears, recommended for cultivation, premium, $6

In addition to the above, are placed at the disposal of the committee, to be awarded in gratuities of not less than $1 each, $20

APPLES.

For best twelve specimens of the following varieties, which are recommended for cultivation in Essex County, Baldwin, Danvers Sweet, Tompkins King, Granite Beauty, Red Russet, Tolman's Sweet, Bailey Sweet, Drap d'Or, Hubbardston, Hurlburt, Porter, Pickman Pippin, Roxbury Russet, Rhode Island Greening, Sweet Baldwin, Gravenstein, Hunt Russet, Smith's Cider, Snow, premium for each, $3

Red Astrachan, William's Favourite, Tetofsky and Sweet Bough are recommended for cultivation, and no premium is offered (ripening early).

For best twelve specimens of any other varieties deemed worthy by the committee, premium for each variety, $1.50

For best collection of Apples, recommended for cultivation, premium, $6

For best twenty-four specimens of any variety of Crab Apple deemed worthy by the committee, $1.50

In addition, are placed at the disposal of the committee, to be awarded in gratuities of not less than $1 each, $20

PEACHES, GRAPES, AND ASSORTED FRUITS.

For best nine specimens of Freestone, White Flesh, Yellow Flesh, Essex County Seedling, each variety, $2

For best collection of Peaches, premium, $3

For best four bunches of Concord, Worden's Seedling, Brighton, Hartford Prolific, Delaware, Martha, Moore's Early, Niagara Grapes, each variety, premium, $3

For Cold House Grapes, produced with not over one month's artificial heat, premiums, $4, 3

For best collection of ten varieties, not less than ten pounds in all, premiums, $7

For best specimens of four bunches of Grapes, varieties other than above, deemed worthy by the committee, premium, $1.50

For baskets of Assorted Fruits, premiums, $4, 3

In addition, are placed at the disposal of the committee, to be awarded in gratuities, of not less than 50 cents each, $25

PLANTS AND FLOWERS.

RULES AND REGULATIONS.

1. All Plants and Flowers for competition and exhibition must be entered for examination by the Committee on or before eleven o'clock, on the first day of the Fair, and all such Plants and Flowers must have been grown by the competitor, except native plants and flowers, and flowers used in bouquets, and baskets of flowers and floral designs, all of which (plants and flowers) must have been grown within the County.

2. When a certain number or quantity of Plants and Flowers is designated in the schedule, there must be neither more nor less than that number or quantity of specimens shown.

3. When only one premium from each exhibitor is offered for any article, only a single specimen or collection can compete, but when a second or third premium is offered, one, two or three specimens or collections may be exhibited for competition, but no variety can be duplicated.

4. No premium shall be awarded unless the specimens exhibited are of superior excellence, possessing points of superiority and worthy of such premium, not even if they are the only ones of their kind on exhibition.

5. No specimen entered for one premium shall be admitted in competition for another different premium.

6. Competitors will be required to furnish information (if the

committee so request), as to their modes of cultivation, or in the case of Native Plants and Flowers, where such were found.

7. All Plants exhibited for premiums must have the name legibly and correctly written on stiff card, wood or some other permanent and suitable substance, and so attached to same as to be easily seen. Flowers when specified to be named to comply also with above rule.

8. Plants in Pots to be entitled to premiums must show skilful culture in the profusion of bloom and in the beauty, symmetry and vigor of the specimens; also Bouquets, Baskets, Design work, etc., must show taste, skill, and harmony in arrangement, both as to colors and material they are made of, and purposes for which they are intended.

9. All flowers exhibited must be shown upon their *own stem*, flowers in "Design" work alone excepted; and this exception if overcome and avoided, to be taken into account by the committee in awarding the premiums.

10. The Committee are authorized to award gratuities for any new and rare plants and flowers or "Designs" of merit for which no premium is offered, but in no case shall the total sum (premiums and gratuities together), exceed the amount $150.00, limited by the Society for this department.

11. No member of the Committee for awarding premiums or gratuities shall in any case vote or decide respecting an award for which such member may be a competitor, or in which he may have an interest, but in such case such member shall *temporarily* vacate his place upon the Committee, and such vacancy for the time being may be filled by the remaining members of the Committee, or they may act without.

12. Attention is again called to above Rules and Regulations for Plants and Flowers, and General Rules of the Society, and all articles not entered in conformity therewith will be disqualified, and premiums will be awarded only to exhibitors who have complied with said Rules, etc.

PLANTS.

Plants competing for these premiums must have been grown in pots, Native Plants excepted, etc. See Rules.

For collections Flowering and Ornamental Foliage Plants, at least 25 specimens, premiums, $10, 5

For collection Palms, at least 5 specimens, 5 varieties, prem., $1

For collection Ferns (cultivated), at least 5 specimens, 5 varieties, premium, $1

For collection Dracenas, at least 5 specimens, 5 varieties, premium, $1

For collection Crotons, at least 5 specimens, 5 varieties, premium, $1

For collection Fancy Caladiums, at least 5 specimens, 5 varieties, premium. $1

For collection Gloxinias, at least 5 specimens, 5 varieties, premium, $1

For collection Begonias, tuberous rooted, at least 5 specimens, 5 varieties, premium. $1

For collection Begonias, 5 specimens, 5 varieties, premium, $1

For collection Coleus, 10 specimens,10 varieties, premium, $1
For collection Fuschias, 5 specimens, varieties, premium, $1
For collection Cyclamen, 5 specimens, 5 varieties, premium, $1
For collection Geraniums, double, 10 specimens, 10 varieties, premium, $1
For collection Geraniums, single, 10 specimens, 10 varieties, premium, $1
For collection Geraniums, fancy, 10 specimens, at least 5 varieties, premium, $1
For collection Hibiscus, 5 specimens, 5 varieties, premium, $1
For collection Carnation Pinks, 10 specimens, at least 5 varieties, premium, $1
For collection Calla Lillies, 5 specimens, premium, $1
For specimen English Ivy, premium, $1
For collection of wood of native trees in sections, suitable for exhibition, showing bark and the grain of the wood, all correctly named with botanical and common name, at least 50 varieties, each variety to be shown in two sections, one of which to be a cross section and neither to be more than four inches in length or diameter, premiums, $5, 3

FLOWERS.

For collection of Cut Flowers, cultivated, 100 specimens, at least 50 varieties, named, $5, 3
For collection of Cut Flowers, native, 100 specimens, at least 50 varieties, named, $5, 3
For pair of Bouquets, for vases, green-house flowers, prem., $2, 1
For pair of Hand Bouquets, green-house flowers, prem., $2, 1
For pair of Bouquets, for vases, of native flowers, prem., $2, 1
For pair of Bouquets, for vases, of garden flowers, prem., $2, 1
For Basket of green-house flowers, premiums, $2, 1
For Basket of Native Flowers, premiums, $2, 1
For Basket of Garden Flowers, premiums, $2, 1
For arrangement of Native Flowers and Autumn Leaves, premiums, $3, 2
For Floral Designs, choice cultivated flowers, premiums, $5, 3
For Floral Designs, native flowers, premiums, $3, 2
For collections Japan Lilies, hardy, named, premiums, $3, 2
For collections Phlox, hardy perennial, named, premiums, $2, 1
For collections Pansies, at least 50 specimens, neatly and artistically arranged, premiums, $2, 1
For collections of Native and Introduced Weeds, with common and botanical name attached, premiums, $3, 2
For twelve Dahlias, large flowering, at least six varieties, named, premium, $1
For twelve Dahlias, Pompon or Lilliputian, at least six varieties, named, premium, $1
For twelve Dahlias, single, at least six varieties, named, premium, $1
For twelve Petunias, double, at least six varieties, named, premium, $1
For twelve Gladiolus (spikes), at least six varieties, named, premium, $1
For twelve Japan Lilies, at least six varieties, named, prem., $1

For twelve Geraniums, double, at least six varieties, named, premium, $1

For twelve Geraniums, single, at least six varieties, named, premium, $1

For twelve Phlox, hardy perennial, at least six varieties, named, premium, $1

For twelve Cannas, at least six varieties, named, premium, $1

For twenty-four Carnation Pinks, at least six varieties, named, premium, $1

For twenty-four Verbenas, at least six varieties, named, premium, $1

For twenty-four Roses, at least six varieties, named, premium, $1

For twenty-four Garden Annuals, at least twelve varieties, named, premium, $1

For twelve Calendulas, at least two varieties, named, premium, $1

For twelve Asters, Double Victoria, premium, $1

For twelve Asters, Double, Truffaut's Peony flowered, prem., $1

For twelve Asters, Pompone, premium, $1

For twelve Phlox, Drummondii, in variety, premium, $1

For twelve Nasturtiums, at least six varieties, premium, $1

For twenty-four Pansies, in variety, premium, $1

For twenty-four Zinnias, double in variety, premium, $1

For twenty-four Marigolds, African, in variety, premium, $1

For twenty-four Marigolds, Dwarf French, in variety, prem., $1

For twenty-four Petunias, single, in variety, premium, $1

For display of Coxcombs, in variety, premium, $1

For twelve Scabiosas, in variety, premium, $1

For twelve Delphiniums, in variety, premium, $1

For twelve Dianthus (double, annual), in variety, premium, $1

For twelve Salpiglossis, in variety, premium, $1

For collection of Sweet Peas, premium, $1

VEGETABLES.

Rules for Fruit apply to Vegetables.

Beets—For best twelve specimens, Eclipse, Dewing, and Edmands, premiums, each variety, $3

Carrots—For best twelve, short top, long Orange and Danvers Intermediate, premium, each variety, $3

For best twelve, Short Horn Orange carrots, $3

Mangold Wurtzels—For best six specimens, premium, $3

Flat turnips—Twelve specimens. For best Purple Top and White Flat, premium, each variety, $3

Ruta Bagas—Twelve specimens. For best Yellow and White, premium, each variety, $3

Parsnips—For the best twelve specimens, premium, $3

Onions—One half peck. For best Danvers, Yellow Flat, and Red, premium, each variety, $3

Potatoes—One half peck. For best Early Rose, Beauty of Hebron, Clark's No. 1, Pearl of Savoy, Early Maine, premium, each variety, $3

Cabbages—For best three specimens, Savoy, Fottler's Drumhead, Stone Mason Drumhead, Red Cabbage, All Seasons, Deep Head, each variety, premium, $3

For next best, each variety, premium, $2

Cauliflowers—For best three specimens, premium, $3
For next best, premium, $2
Celery—For best four roots, premium, $2
Sweet Corn—For twelve ears ripest and best Early, premium, $3
For best twelve ears in milk, Late, premium, $3
Squashes—For best three specimens, Marrow, American Turban, Hubbard, Marblehead, Essex Hybrid, Bay State, Sibley, Butman, each variety, premium, $3
Melons—For best three specimens, Nutmeg, Musk, Cassaba, Salmon Flesh, each variety, premium, $2
For best two specimens Watermelons, premium, $2
Tomatoes—For best twelve specimens, Acme, Emery, Cardinal, Essex Hybrid, Livingstone, or any other variety, each variety, premium, $3
For exhibition of greatest variety of Tomatoes, premium, $3
Cranberries—For pecks of cultivated, premiums, $3, 2, 1
For collection of vegetables, not less than three of a kind, premiums, $8, 6, 4, 2
Placed at the disposal of the committee for whatever appears meritorious, $30

☞No competitor for premium to exhibit more or less number of specimens of any vegetables than the premiums are offered for.

Collections of Vegetables where premiums are offered for a number of varieties must be entered and placed, not less than three of a kind, by themselves on the tables assigned for collections. No collection shall receive but one premium. Specimens of any varieties in such collections are not to compete with specimens of the same variety placed elsewhere. Exhibitors of such collections however, are not prevented from exhibiting *additional* specimens of any variety with and in competition with like variety. All vegetables must be entered in the name of the grower of them.

Size of vegetables.—Turnip Beets to be from 3 to 5 inches in diameter; Onions, 2 1-2 to 4 inches in largest diameter; Potatoes to be of good size for family use; Squashes to be pure and well ripened, Turban, Marrow, Hubbard, Marblehead, each to weigh 8 to 16 lbs.

GRAIN AND SEED.

For best peck of Shelled Corn, Wheat, Oats, Barley, Rye, Buckwheat, and Field Beans, each, premium, $1
For 25 ears of Field Corn, premiums, $5, 3, 2
For 25 ears of Pop Corn, premiums, $3, 2
For collections of Field and Garden Seeds, premiums, $8, 6, 4, 2
All grain or seed *must have been grown by the exhibitor in the County* to receive a premium.

Domestic Manufactures.

Contributors must deposit their articles at the Hall before 11 o'clock on the first day of the Exhibition. Articles not thus deposited will not be entitled to a premium. Gratuities will be awarded for articles of special merit for which no premium is offered; but no premium or gratuity will be awarded for any article manufactured out of the County, or previous to the last exhibition of the Society.

COUNTERPANES AND AFGHANS.

For Wrought Counterpanes having regard to the quality and expense of the material, premiums, $4, 2

Gratuities will be awarded for articles belonging to this department, the whole amount of gratuities not to exceed $25

CARPETINGS AND RUGS.

For carpets, having regard to the quality and expense of the material, premiums, $4, 2

For Wrought Hearth Rug, having regard both to the quality of the work and expense of the materials, premiums, $3, 2

Gratuities will be awarded for articles belonging to this department, the whole amount not to exceed $25

ARTICLES MANUFACTURED FROM LEATHER.

For best pair hand made and machine made Men's Boots, Women's do., Children's do., each, premium, $2

Best Team, Carriage, and Express Harness, each, premium, $5

$10 are placed at the disposal of this committee, to be awarded in gratuities.

For the best exhibition of Boots and Shoes, manufactured in the County, each, premium, Diploma of the Society.

MANUFACTURES AND GENERAL MERCHANDISE.

For display of Bonnets, premiums, $4, 3

For Horn Combs, not less than one dozen, premium, $2

At the disposal of the committee in this department, to be awarded in gratuities not exceeding $3 in any one gratuity, $20

FANCY WORK

Of Domestic Manufacture are not included in the above.

At the disposal of the committee in this department, to be awarded in gratuities not exceeding $3 in any one gratuity, $50

WORKS OF ART.

At the disposal of the committee in this department, to be awarded in gratuities not exceeding $3 in any one gratuity, $50

WORK BY CHILDREN.

For specimens of work performed by children under 12 years of age exhibiting industry and ingenuity, premiums, $3, 2

At disposal of committee to be awarded in gratuities, $10

List of Premiums to be Awarded by the Trustees in November.

FARMS.

Competitors for this premium must give notice of their intention to the Secretary on or before June 15th, and the farms entered for premium will be viewed by the committee twice during the year. Crops growing on farms that are entered for premium, cannot be entered with another committee for separate premiums—except crop specimens exhibited at the Fair.

Any person desirous of having *his farm inspected, without entering it for premium*, may make application to the Secretary, and it will be viewed and reported upon by the committee.

For the best conducted and most improved farm, taking into view the entire management and cultivation, including lands, buildings, fences, orchards, crops, stock, and all other appendages, with statements in detail, relating thereto, premium, $30

IMPROVING WET MEADOW AND SWAMP LANDS.

For best conducted experiments relating to wet meadow or swamp lands, on not less than one acre, the course of management, and the produce, etc., for a period of two years at least, to be detailed, with a statement of all the incidental expenses, premiums, $15, 10

NOTE.—The Committee is instructed to ascertain how many, if any, reclaimed swamps in this County have been abandoned or have returned to natural grasses. Persons knowing of such are requested to notify the Secretary or Committee.

IMPROVING PASTURE AND WASTE LANDS.

For best conducted experiments in renovating and improving pasture land, other than by ploughing, so as to add to their value for pasturage, with a statement of the same, premiums, $15, 10

For best conducted experiments renovating and improving waste lands, so as to add to their agricultural value, with statement of the same, premiums, $15, 10

No premium to be awarded to any person for a repetition of an experiment in meadow, swamp or pasture lands, for which he has already received a premium.

UNDER-DRAINING LAND.

For best conducted experiments in under-draining land, regard being had to the variety of soil, sub-soil, and other local circumstances, premiums, $15, 10

NOTE.—The same instructions under "Improving Wet Meadow and Swamp Lands" apply to this Committee.

MANURES.

For most exact and satisfactory experiments, in the preparation and application of manures, whether animal, vegetable or mineral, premiums, $15, 10

COMPARATIVE VALUE OF CROPS AS FOOD FOR CATTLE.

For most satisfactory experiments upon a stock of cattle, not less than four in number, in ascertaining the relative value of different kinds of fodder used in feeding stock for milk and other purposes, with a statement in detail of the quantity and value of the same, as compared with English hay, premium, $25

FATTENING CATTLE AND SWINE.

For most satisfactory experiments in Fattening Cattle or Swine, with a statement in detail of the process and result, prem., $10, 5

GRAIN AND OTHER FRUITS.

Claimants on Grain and Root Crops will be required to state the size of the piece of land, when they enter, and conform to the following rules: Entries of Grain Crops to be made on or before September 10th; Root Crops on or before October 10; giving ample time for the crops to be examined by the committee before harvesting. Statement to be made in conformity with the following form, must be forwarded to the Committee previous to November 1st.

All calculations and figures given in reports of, and statements of Crops are to be made on the *basis of an acre*, results in all cases, to be given at the rate per acre.

In pursuance of authority delegated to the Board of Agriculture by Chap. 24 of Acts, 1862, Agricultural Societies receiving the bounty of the State are required to make use of the following form, and be governed by its conditions in the mode of ascertaining the amount of crops entered for premium.

ESSEX AGRICULTURAL SOCIETY.—Statement concerning a crop of ———, raised by Mr.———, in the town of ———, ———, 1892.

What was the crop of 1890 ? What manure was used and how much ? What was the crop of 1891 ? What manure was used and how much ? What is the nature of the soil ? When, and how many times plonghed, and how deep ? What other preparation for the seed ? Cost of ploughing and other preparation ? Amount of manure, in loads of thirty bushels, and how applied ?

Value of manure upon the ground ? How used ? (What amount of Commercial Fertilizer used ? How used ? Value of same when applied ?) When and how planted ? The amount and kind of seed? Cost of seed and planting ? How cultivated and how many times? Cost of cultivation, including weeding and thinning ? Time and manner of harvesting ? Cost of harvesting, including the storing and husking or threshing ? Amount of crop, etc. Signed by ———Competitor.

The committee, to whom is entrusted the award of the premiums on field crops, may award them according to their judgment, but for the purpose of furnishing accurate statistics for the benefit of agriculture, shall select certain of the crops, and require the owners thereof to measure the land and weigh the crops accurately,

giving to the committee a certificate of the same, and give all possible information thereon over their own signatures, and return the same to the Secretary of the Society, to be published in the annual transactions.

In ascertaining the amount of crop, any vessel may be used and the weight of its contents once, multiplied by the number of times it is filled by the crop.

In measuring the land or weighing crops, any competent person may be employed, whether a sworn surveyor or not, and must give certificate.

The certificate shall state the weight of all crops only in a merchantable state.

In ascertaining the amount of a hay crop entered for premium, the measurement of the hay in the barn may be employed.

Rules of Measure Practiced and Adopted by the State Board of Agriculture.

Wheat, Potatoes, Sugar Beets, Ruta Bagas, Mangold Wurtzels,	60 lbs.	to bush.,
White Beans and Peas,	62 "	"
Corn, Rye,	56 "	"
Oats,	32 "	"
Barley, Buckwheat,	48 "	"
Cracked Corn, Corn and Rye, and other meal, except Oat,	50 "	"
Parsnips, Carrots,	55 "	"
Onions,	52 "	"

1. For the best conducted experiments of Rye, not less than twenty bushels to the acre, fifty-six lbs. to the bushel, on not less than one acre, premiums, $10, 5

2. For best conducted experiments of Wheat, not less than thirty bushels to the acre, sixty pounds to the bushel, on not less than one acre, premiums, $10, 5

3. For best conducted experiments of Oats, not less than fifty bushels to the acre, thirty-two pounds to the bushel, on not less than one acre, premiums, $10, 5

4. For best conducted experiments of Barley, not less than forty bushels to the acre, forty-eight pounds to the bushel, on not less than one acre, premiums, $10, 5

5. For best conducted experiments of Indian Corn, on not less than one acre, premiums, $10, 5

6. For largest quantity and best quality of English Hay, on not less than one acre, regard being had to the mode and cost of cultivation, premiums, $10, 5

7. For best yield of Field Beans, on not less than one-half acre, and not less than twenty-five bushels per acre, premiums, $10, 5

ROOT CROPS.

1. For best conducted experiments in raising Carrots, fifty-five pounds to the bushel, premiums, $10, 5

2. For best conducted experiments in raising Parsnips, fifty-five pounds to the bushel, premiums, $10, 5

3. For best conducted experiments in raising Ruta Bagas, sixty pounds to the bushel, premiums, $10, 5

4. For best conducted experiments in raising Mangold Wurtzels, sixty pounds to the bushel, premiums, $10, 5

5. For best conducted experiments in raising Sugar Beets, sixty pounds to the bushel, premiums, $10, 5

6. For best conducted experiments in raising Onions, fifty-two pounds to the bushel, premiums, $10, 5

7. For best conducted experiments in raising Potatoes, sixty pounds to the bushel, premiums, $10, 5

8. For best conducted experiments in raising Cabbages, premiums, $10, 5

9. For best conducted experiments in raising Squashes, premiums, $10, 5

10. For best conducted experiments in raising Summer English Turnips for the market, premiums, $10, 5

Raised on not less than half an acre, and the quantity of crop to be ascertained by weight; so far as practicable the crop to be free from dirt, without tops, and in a merchantable condition at the time of measurement.

Claimants for premiums on Grain and Root Crops must forward statement to chairman of committee *before Nov. 1st.*

FOREST TREES.

1. For plantation of either of the following species of forest trees, viz : White Oak, Yellow Oak, Locust, Birch, White Ash, Maple, Walnut, or White Pine, not less than three years old, and not less than 1000 trees, premium, $20

2. For plantation of not less than 600 trees, premium, $10

3. For ornamental trees, ten or more set on any street, road or farm, and cared for five years, premium, $10

CRANBERRIES.

For best conducted experiment in the cultivation of the Cranberry, at least two summers, on not less than twenty rods of land, with written statement of the quantity and quality of the land, expense of planting, weeding and culture, and amount of crops produced. Premium to be paid in 1891 or 1892. $15

For best experiment do., on not less than ten rods of land, premium, $10

For best do., on not less than five rods of land, premium, $5

STRAWBERRIES AND OTHER SMALL FRUITS.

For best crop of Strawberries, on not less than twenty rods of land, expense of planting, culture, crop, etc., stated in writing, premium, $10

For best crop of Currants, Raspberries and Blackberries, with statement as above, premiums, each, $10

NEW WINTER APPLES.

For a new variety of Winter Apple, originated in this County, equal or superior to the Baldwin, premium, $100

For a new variety of like character originating elsewhere, provided it has been cultivated in the County sufficiently to prove it equal or superior to the Baldwin for general purposes, premium, $20

For a successful experiment in destroying the codling moth and other worms destructive to the apple, premium, $25

NOTE.—Persons who consider themselves competitors will send Post Office address to Secretary, and others in the County wishing to compete for above must notify Secretary, and furnish a full statement of their apple, and also scions when called for under his directions, to be tested by the Society.

SEEDLING POTATOES AND EXPERIMENTS.

For best Seedling Potato, originating in Essex County, to equal in yield, earliness, and quality, the Early Rose, and to surpass it in one or more of these particulars, premium paid after three years' trial, $25

In testing the value of a Seedling Potato, the committee are instructed to take sworn testimony of the cultivator with regard to the yield, after having inspected the crop.

For the most satisfactory experiment to extend through five consecutive years, to settle the following facts relative to raising potatoes:—premium, $50

1st. Will whole, medium sized Potatoes, yield better results than pieces cut to two eyes?

2nd. What will be the result of continuously planting small-sized potatoes of the same strain a series of years?

3rd. Difference between hilling and flat cultivation.

4th. Effect, if any, of cutting off seed ends before planting.

5th. Effects of deep and shallow planting.

6th. Raising from sprouts alone from same strain.

7th. Can potatoes having dwarf vines be planted nearer than others?

8th. Best distances apart for seed in the drill.

9th. To show the effect of covering the top with earth at several times after they had come up.

To be raised on not less than a half acre of land, uniform in character, and all to receive the same kind and quality of manure and cultivation, and to be inspected by the committee at the time of gathering the crops.

ESSAYS AND FARM ACCOUNTS.

The Essays must be transmitted to the Secretary by the 1st of November, with sealed envelopes containing the names of their authors, respectively, which shall not be opened by the committee, nor shall the names be known to the committee until they shall have decided upon the merits of the Essays.

For original Essays on any subject connected with Agriculture, in a form worthy of publication, premiums, $15, 10, 8

For best statement of Actual Farm Accounts, drawn from the experience of the claimant, in a form worthy of publication, premium, $10

For Reports of Committees upon subjects for which premiums are offered, premiums, $10, 8, 6

Committee—G. L. Streeter, Salem; N. M. Hawkes, Lynn; D. E. Safford, Hamilton; J. M. Danforth, Lynnfield.

LIBRARY.

Committee—Andrew Nichols, Danvers; Henry Brooks, Salem; B. P. Ware, Marblehead; J. M. Danforth, Lynnfield.

ENCOURAGING AGRICULTURAL LIBRARIES.

It shall be the duty of the Committee to communicate with such persons in the several cities and towns in the County, as, in their judgment, will best encourage the establishment of, or improvement of, collections of books, pamphlets, reports, essays, newspapers, etc., relating to agriculture, and request their aid in thus advancidg the cause of agriculture, and co-operate with such persons in promoting the object herein referred to.

Committee—Francis H. Appleton, Peabody; Henry Wheatland, Salem; James J. H. Gregory, Marblehead.

NEW MEMBERS.

For the person who obtains the largest number of new members for the Society from any Town or City before the first day of November next, premium, $6

NOTE.—Names of new members, with name of person procuring them, can be sent as fast as obtained, to the Secretary of the Society, who will make a record of them.

Persons paying three dollars will receive a "Certificate of Membership" which is for life. No fines or assessments are ever imposed and members are entitled to vote in all its transactions, with the free use of the Library and a copy of the publication of Society's transactions each year.

Committee—Secretary, John M. Danforth, Lynnfield.

TREADWELL FARM.

Committee—Benj. P. Ware, Marblehead; C. C. Blunt, Andover; B. P. Pike, Topsfield; G. B. Blodgette, Rowley; George B. Bradley, Methuen; John M. Danforth, Lynnfield.

AUDITORS.

Committee—J. Hardy Phippen, Salem; Benj. P. Ware, Marblehead; E. Pope Barrett, Peabody.

FARMERS' INSTITUTES.

Francis H. Appleton, James P. King, C. C. Blunt, O. S. Butler, John M. Danforth, Lynnfield.

DELEGATES.

From the Essex Agricultural Society to attend Exhibitions of Societies, Farmers' Clubs and Fruit Growers' Associations in Essex County, and report any information that shall seem valuable for publication.

The Secretary to be notified of time of holding their exhibition, who will notify the chairman of Committee to assign Delegate.

COMMITTEES.

All Committees, including committees to judge of Crops, of Exhibits at Fair, and of the Arrangements for the Fair, are chosen by the Trustees at their June meeting.

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TRANSACTIONS

FOR THE YEAR 1892

OF THE

ESSEX AGRICULTURAL SOCIETY

(ORGANIZED 1818.)

FOR THE

COUNTY OF ESSEX,

IN MASSACHUSETTS,

AND ITS

SIXTY-NINTH ANNUAL ADDRESS

BY

HON. E. P. DODGE,

OF NEWBURYPORT.

With the Premium List for 1893.

PUBLISHED BY ORDER OF THE SOCIETY.

SALEM, MASS.:
OBSERVER BOOK AND JOB PRINT,
1892.

ANNUAL ADDRESS.

Mr. President and Members of the Essex Agricultural Society:—When I received the invitation of your Board of Trustees to address you to-day, I found it somewhat difficult to determine upon what subject I should speak. Before giving the matter any serious consideration, or even assuming that it was possible for me to undertake such a service, I had learned that I should not be confined to subjects specially connected with agriculture. Had it been otherwise, I should have unhesitatingly declined to appear before you.

Although I was born and bred on a farm, and until sixteen years of age was familiar, as all New England farmers' boys are, or ought to be, with the many duties of such a position in life, I do not feel now that I am in any important sense familiar with practical agriculture. In my youth I saw enough of farming to show me, when supplemented by my observation in later years, how complicated and difficult a science it is when wisely conducted.

As has been said, all the knowledge we can acquire in this life will serve only to direct us towards the immeasurable wisdom that will still be unexplored, so my little knowledge of farming has served to impress me with a lively sense of how much more there is in it that is to me

entirely unknown. I may add, that it has also given me such a high appreciation of the ability and acquirements of you successful farmers, that I feel sure it would be presumptuous in me to attempt to interest you in any matter which comes within your special field of labor.

I shall therefore do nothing of that sort, but, instead, shall briefly ask your attention to some of the important principles which influence the production and distribution of wealth, with the purpose of showing, if I can, the methods by which the material welfare of mankind has been, and may still further be, promoted.

This is a subject in which I assume we all have a common interest, whether we are farmers, merchants or manufacturers.

I use the word wealth in this connection not to designate only money or accumulated savings, but I use it to represent all the different kinds of property in which men deal, and which are essential to our existence and happiness. Money, which many appear to esteem as the only thing of substantial value, in itself is not wealth, except in a limited degree. In the broad sense, wealth is improved lands, houses, barns and cattle, factories and stores, ships and railroads, and all the various products of the soil, the sea, the mines and the factories.

The multiplication and more general possession of these things have been most important agencies in the civilization of mankind, and the better our understanding of the economic laws which govern their development and use, the clearer will be our perception of the way in which we can do most for our own and the common welfare.

In the first place we should appreciate the fact that each of us is a part of that complex organism we call

society; that our interests are common interests, and the highest material advantage of the individual is best attainable by means which at the same time promote the general prosperity.

Men are bound together by conditions that make them dependent upon each other. Our personal welfare is so inextricably connected with the welfare of our neighbors, of our fellow countrymen, that we cannot separate ourselves from them if we would. We do not feel these bonds, for we have so grown into and with the society in which we live, that we are quite unconscious of the details of its operations.

We know that life has not always been what it now is. Its conditions have been slowly but constantly changing; through "the survival of the fittest" and through many ages of development the world has been brought to the high standard of living which we enjoy.

There was a time when individual men were much less dependent upon their fellow men than now. Their wants were few and, for the most part, were supplied by their own hands. They hunted the animal whose flesh they ate, and from whose skin was made all the clothing they required. Their shelter was either the natural caves in the hillside or rude huts of the simplest possible design. There was no science nor art that we should recognize as such, and little culture either of the brain or hand. Their rude training was in the simplest method of obtaining the barest necessities of existence. Life seems then to have been a mere animal existence, which to us would be absolutely unendurable.

From that primitive condition how great the change to the civilization of the present time. The products of

every quarter of the globe will be brought into requisition to furnish dinner which will be spread before you to-day, and in the preparation of it will be exhibited results of the thought and experience of a thousand years.

In the clothing you wear, materials gathered from every zone have been wrought by skillful hands in many nations, and fashioned by art that kings could not command in former times. The abodes of the humblest among us are models of comfort and convenience, and in every village private citizens dwell in houses in some respects more magnificent than the palaces of ancient days.

How marvelous now are the acquirements of the human brain, and how wonderful the inventions it has wrought. The steam-engine, the telegraph, the telephone, the electric motor, but a few years ago the wildest fancy did not dream that such things were possible. I have sometimes thought that the stupendous facts which the telescope reveals are no more impreesive than the amazing power of the mind that invented the instruments by which the laws of planetary motion were discovered, and the vast distances to the fixed stars approximately determined.

The most potent agencies in the development of this high civilization have been, first, the division of labor in the production of wealth, by which men have been made more and more dependent upon one another; and, second, co-operation in the distribution of wealth, through the means of exchanges or trade, by which men have been made more and more to help each other. In the beginning, each individual practiced all the arts that were known; now, few are masters of more than a single department in any of the great callings. Instead of each

one producing all for himself that he requires, most men produce almost nothing directly for themselves. Each of us does some one thing for a hundred or a thousand others, perhaps, and exchanges that product of his labor for the many things he deems essential to his existence, comfort and happiness, for, in effect, we simply exchange commodities when we sell for money that which we do not wish to use, and purchase with that money the things we need.

If I may be permitted to draw an illustration from my own business, I think I can make clear the truth of my statement that men do little directly for themselves. I am a shoe manufacturer, but I do not make the shoes I wear myself. The specialization in business which competition has brought about has limited me to the production of women's shoes only.

Those of you who have long been familiar with the business of Essex county will remember the time when Georgetown, Danvers and some other towns were extensively engaged in the manufacture of men's boots and shoes. They are so no longer, and, with a few unimportant exceptions, all Essex county shoemakers are limited to the production of women's goods or those kinds of men's goods which are practically of the same character as those made for women. Other counties, notably Plymouth, Norfolk and Worcester are almost exclusively engaged in the production of men's goods, so far as they follow the shoe business, and these facts illustrate the tendency and the latest developments in the division of labor.

So, while I make shoes, I do not make my own, but must buy them from some other manufacturer. In other words, by the aid of modern business methods I exchange

the women's shoes I make for the men's shoes I must wear. Neither do I supply myself directly with any of the commodities I must consume. I must go to one class of men for the food I eat, to another for the clothes I wear, to another for the house that shelters me; in fact, I have looked over the two hundred and sixty-five different occupations reported in the United States census for 1880, and I believe that at some time in my life I have been indebted for some service to the followers of every one of those two hundred and sixty-five different pursuits except the corset makers and the undertakers, and, at least, the last of these will yet serve me, as I trust I shall be accorded Christian burial.

What is true of myself in this respect is true of all other men as well. Each one of those more than two hundred and fifty classes into which the industry of the country is divided, are as dependent as I am upon all the others.

But the United States census does not tell the whole story, for great as is the number of different occupations reported therein, that number does not by any means represent the full extent of the subdivision of labor. Boot and shoe makers, for example, are classed as a single occupation. You will find upon investigation, however, that shoemaking in factories is subdivided into more than thirty different branches, and each of those thirty is so different from all the others that a shoe factory operative is through life practically limited to employment in one of those thirty or more special kinds of work.

Not that it is difficult for any one person to learn to do the work required in the different parts into which manufacturing is divided, but constant practice in one particu-

lar branch develops such superior rapidity in the performance of the work, that the efficiency of a given number of men is very much greater than it formerly was when one man did all the work on the completed product.

By the operation of economic laws the most efficient labor is the best paid, and is the kind of labor that is most constantly employed. Eventually it forces its competitors into some other employmant, or compels the other industries to adopt similar methods. While we may safely assume that a development on this line has been in progress from the earliest times, the introduction of modern machinery has so greatly hastened it that the process and its effects are more generally recognized now than ever before.

By division of labor its products have been vastly multiplied; fine art has been combined with mechanical process, so that cultivated and discriminating tastes may be gratified, and at the same time economies in methods have been adopted which have improved the quality as well as reduced the cost of the completed product. Through the medium of exchanges all these advantages have been utilized for the greater benefit of mankind.

Every man who is engaged in productive enterprises attempts to create or develop some special commodity, not for his own use, but to sell in order that he may procure the things he wants. Primeval man supplied his own necessities, but he very early discovered that persons differed in their ability to do certain things, and as men prefer to perform that kind of work for which they have special aptitude, our first ancestors soon contrived to do those things individually in which each one excelled. When the first man who excelled in the production of

some particular thing learned to exchange that thing with some other man who was able to produce advantageously some other commodity, then was learned the first great lesson in practical co-operation.

It is practical, effective and beneficent co-operation when each man labors in the field in which he can accomplish most, and gives of the fruits of his toil, in exchange for such commodity or service as he may require. All the agencies of trade, of transportation and of finance exist for and are devoted to, such a simple purpose as the taking from you and me what we do not want, and giving us instead the things we need. The more perfect the operation of this process of exchange, the more rapidly does our wealth increase, and the more general is the enjoyment of material prosperity.

Obviously a great quantity of goods in our possession will be of little value if we cannot exchange them, or, in other words, sell them. If I make a great many shoes there must be a great many people who make no shoes at all, who will come to me for the supply they must have. If you raise great crops of grain, there must be a great number of people somewhere who raise no grain and who must come to you for so much of your surplus as may be necessary for their subsistence. The same conditions must prevail in relation to all the varieties of merchandise in which men deal.

In this connection we should also take into consideration the fact that the needs of mankind are never quite satisfied and are continually increasing. As fast as the means of supplying our wants are multiplied, new wants appear. There may always be a demand somewhere for the surplus commodities we produce, no matter how great the quantity.

The great problem we have to solve is, how can we find an adequate market — how can the wealth we produce be most generally and economically distributed so that it may bring to all the greatest possible measure of satisfaction? The most important means to this end is the multiplying and diversifying of the variety of employment in which our people may be profitably engaged.

We can better appreciate the importance of a diversity of industry if we consider what would be our position under the narrowest limit of variety. If one-half were shoemakers and the other half farmers — a condition which can exist only in theory — the quantity of the products of each class for which the country would furnish a market would be extremely limited. If, however, we suppose that one-third only were farmers, and one-third shoemakers, and one-third makers of clothing, it is obvious that this simple multiplication of the variety of industries would double the market of both the farmers and the shoe manufacturers, considered as a class. A similar advantage, differing only in degree, will be gained if all the other pursuits are followed which are known to mankind, and which may be advantageously followed in our country. If the constantly multiplying and broadening fields of human activity are cultivated by our fellow citizens, is it not evident that there will be a constantly-increasing demand for the products of the farms and workshops already established?

Nor is the development of markets for our products the only advantage to be gained by diversifying our industry. One of the chief causes of poverty in these and all times is the fact that men cannot always find employment to which they may be adapted and where they can work advantageously. The number of productive laborers, as compared

with the whole population, is suggestively small. Out of a total population in 1880 of over 50,000,000, the census reports 17,392,000 engaged in gainful avocations, — only about one person in three being so engaged. Nor does this enumeration take into account the great loss of time for lack of steady employment. That system which offers to the greatest possible number the opportunity to work, is the system that will do most to promote the general welfare.

That a greater diversity of industry does that, I think, is susceptible of proof. In 1870, 32.43 per cent. of the people of this country were engaged in productive employment, and in 1880, 34.68 per cent. were so engaged, an increase of more than 2 per cent. in 10 years, during which time the recent great tendency to a multiplication of industries was in operation. If there had been no increase in the percentage of employed persons during that decade, 1,126,579 of the 17,392,000 employed ones would have been in idleness in 1880. The great benefit to the country of the labor of these 1,000,000 persons can hardly be overestimated. They added materially to your market and mine as well.

The wealth of the country is the product of its labor, both mental and physical. Greater opportunity develops workers, and more workers make more wealth, and the more wealth there is in the country the greater will be the material welfare of all of its inhabitants. I believe this to be strictly true, notwithstanding the assertion so often made, but never substantiated by proof, that the "rich are growing richer, and the poor poorer." The rich may be growing richer, but it is equally true that the poor are also getting to be much better off.

Inequalities in individual conditions will always exist, but they are more apparent than real. The great wealth

which in recent years has accumulated in a few hands, if an evil at all, is, I believe, only a temporary evil. The Vanderbilts, the Goulds, the Rockefellers, are the product of the sudden and vast increase of riches generally in the last thirty years. Thirty, fifty or a hundred years are but a little time in the history of the human race, and under the free laws which we have and other nations are adopting, the wealth which fortune has poured so bountifully into a few hands will be scattered into the hands of the many. The nation's wealth will ultimately benefit the whole people.

A study of the processes by which wealth is produced and distributed must impress us with a sense of how small is the influence which any individual exerts, and how great is our dependence upon organized society. The whole fabric of it is employed in ministering to your wants and to mine. "No man liveth unto himself alone." In the process of helping ourselves we help each other, and we cannot avoid this result if we would. It has been said that the most enlightened selfishness will dictate the most orderly, virtuous and Christian life. In harmony with that doctrine may we not say — and this is the special point I would make — that the wisest and most effective method of securing the greatest success to our own particular industry must have, as an essential part of its plan, the promotion of the prosperity of every other class of workers in the industrial field.

I have stated what I believe to be the great agent in increasing wealth, viz., the division of labor, and the important condition which will make it most generally beneficial by being most generally distributed, which is the greatest practicable diversification of industry. The econ-

omic policy which will best accomplish such a result I leave you to determine, urging you to deal with the question solely on the basis of reason and experience. No system or policy should be approved that cannot be reasonably shown to be for the benefit of the people at large and within the limits of our own country at least, where conditions of life are practically identical. There should be a free field and no favor.

Trusts and combinations are against the public interest, because competition is the necessary stimulus to improvement and economy in production, and wealth accumulated by a monopoly does not as a rule make the nation better off. It is simply a process of taking the money out of the pockets of one class of citizens and putting it into the pockets of another class without rendering a fair equivalent therefor.

Where competition is free among a people, neither profits of business nor wages of labor will, relatively, in the long run, be unduly increased or diminished. Profits and wages must vary in order that the requisite number of persons may be employed in different industries.

As in the physical world floods and droughts at times alternately threaten destruction, while on the whole the productiveness of the earth increases, so in the industrial world, although in every department we have to meet disastrous experiences, we know that the condition of mankind has through the ages constantly improved.

While we affirm this to be true, we are so constituted that we can never view the present situation with unalloyed satisfaction. Unfortunately, reasons always exist which compel the thoughtful man to regard the tendency of his times with anxiety. We are told that "Every rose must

have its thorn," so, for all the gains we make we are obliged to suffer a loss, which in some cases seems almost to make the gain of doubtful advantage. The great increase in the productive capacity of mankind by the division of labor has been achieved, I fear, at the expense of some qualities of character where we can ill afford to lose. The man who spends his working days, year in and year out, in the performance of some simple branch of mechanical work may get a comfortable living thereby, but can hardly get anything of more substantial value, even if his mental and moral natures are not dwarfed by their enforced inaction.

The discipline of the wider practical knowledge and more persistent efforts which were necessary to gain a livelihood in former times, developed a sturdy race. Living has been made easier, but has not something of independence and manliness been sacrificed? It is certainly an open question whether the tendency to lessen the labor of life will result in making life any better.

Von Moltke, that great German — great in the arts of peace as well as in the art of war — believed war to be essential to the highest welfare of the human race. We do not like to endorse that opinion, and yet we know that men develop the greatest capacity and highest character only in schools of adversity, or "in times which try men's souls."

It is one of the many great advantages of the farmer's career that, so far, it has suffered least from the industrial changes I have been speaking of. You deal with affairs in a broader way than do the artisans, and you occupy a position of independence which no other calling can confer. While your work is hard it ministers to good health, and if its stimulus to mental activity moves you as it ought, it will

develop in you wisdom and strength of character which constitute the triumphs of life.

So while you may profit by adopting the methods by which the wealth of the world has been so greatly augmented, and devote your energies more to the development of some specialty in agriculture, do not lightly esteem the advantages of the old order of things, for when life was a severer struggle it surely possessed dignity and power, nor was it devoid of gladness.

You may well rejoice that you can still to so great a degree respond to the old farmer's song, with which I will close :—

"Let the wealthy rejoice,
Roll in splendor and state,
I envy them not, I declare it.
I eat my own lamb,
My chickens and ham,
I shear my own fleece and I wear it.
I have lawns, I have bowers,
I have fruit, I have flowers,
The lark is my morning alarmer;
So jolly boys, now,
Here's God-speed to the plough,
Long life and success to the farmer."

SEVENTY-SECOND

Annual Cattle Show and Fair.

The Cattle Show and Fair of this society opened Tuesday, Sept. 27th, 1892 at Lawrence, it being the second year in that city. As last year the citizens took an active interest to make the Fair a success, the weather being all that could be desired.

The entries of live stock were largely in excess of last year, and would compare favorably as to quality with former years, although many of them were late in arriving.

In the ploughing match there were a larger number of entries than usual, there being six entries of sulky ploughs, which are undoubtedly coming to the front with the rest of our modern farm implements. There seemed to be an unusual interest taken in this department, and the work performed was excellent.

In the exhibition hall the entries were below that of some previous years, and the quality was not in all cases what it should have been for Essex County.

The Grange exhibit rather excelled that of one year ago, being a very handsome feature of the Fair, so artistically arranged with fruit, flowers and vegetables that it was a fine show of itself.

On Wednesday, Sept 28, the annual address was delivered by Hon. E. P. Dodge of Newburyport, before a large audience in the Lawrence Street Church, the subject being a broad one, namely: "The Important Principles which influence the Production and Distribution of Wealth, with

the Purpose of showing the Methods by which the Material Welfare of Mankind has been and may still be promoted," which was listened to with the closest attention.

The Scripture reading and prayer by the Rev. Mr. Wolcott, pastor of the church, were very appropriate for the occasion, as was also the excellent singing by the quartette.

After the conclusion of the services at the church, the annual dinner was served in Pilgrim Hall, after which President Appleton called the assemblage to order and made introductory remarks, after which he introduced Mayor Doe of Lawrence who made some very pleasant remarks regarding the Society and the work it is engaged in, followed by Hon. Moses T. Stevens, Henry Cabot Lodge, Hon. W. H. Knox and others, all of whom contributed a good deal of spice and mirth for the occasion.

The entries in the several departments of the Fair for 1892 and 1891 are tabulated for comparison as follows :

STOCK, IMPLEMENTS, ETC., ON FREE SHOW GROUNDS.

Class.	Entries in 1892.	From Different Places in 1892.	Entries in 1891.	From Different Places in 1891.
Fat Cattle,	8	4	6	3
Bulls,	15	7	9	4
Milch Cows,	14	3	12	2
Herds of Milch Cows,	3	3	3	2
Heifers, Pure Bred,	25	7	23	4
Heifers, Native or Grade,	30	7	17	5
Heifer Calves, Pure Bred,	3	2	3	2
Heifer Calves, Native or Grade,	2	2	10	3
Working Oxen and Steers,	7	4	12	4
Steers,	3	3	4	3
Stallions, Farm and Draft,	1	1	0	0
Town Teams,	1	1	0	0
Stallions for Driving Purposes,	7	5	13	8
Brood Mares, Farm and Draft,	4	3	4	3
Brood Mares, Driving Purposes,	7	5	13	8

Class.	Entries in 1892.	From Different Places in 1892.	Entries in 1891.	From Different Places in 1891.
Family Horses,	9	7	13	10
Gent's Driving Horses,	7	5	6	4
Farm Horses,	9	6	6	4
Pairs of Farm Horses over 2500 lbs.,	11	7	2	2
Pairs of Farm Horses less than 2500 lbs.,	7	7	5	4
Colts, Farm and Draft,	12	8	6	5
Colts, Driving Purposes,	16	9	30	10
Swine, Large Breeds,	28	8	12	6
Swine, Small Breeds,	2	1	2	2
Sheep,	6	2	3	2
Poultry,	131	13	31	9
Harrows for Trial,	1	1	3	2
Agricultural Implements,	21	7	13	5
Carriages,	15	5	3	2
Ploughing,	19	10	15	9
Total on Free Show Grounds,	428	23	268	20

EXHIBITS IN HALL.

Class.	Entries in 1892.	From Different Places in 1892.	Entries in 1891.	From Different Places in 1891.
Dairy,	10	5	3	3
Bread and Canned Fruit,	46	14	50	14
Honey,	0	0	2	2
Pears,	144	17	192	16
Apples,	197	17	215	16
Peaches, Grapes and Assorted Fruit,	91	12	83	12
Plants,	4	1	0	0
Flowers,	92	14	70	13
Vegetables,	308	17	369	19
Grain and Seed,	25	10	23	9
Counterpanes and Afghans,	59	7	70	7

Class.	Entries in 1892.	From Different Places in 1892.	Entries in 1891.	From Different Places in 1891.
Carpetings and Rugs,	30	7	40	8
Articles Manufactured from Leather,	9	4	4	2
Manufactures and General Mdse.,	36	7	28	5
Fancy Work,	156	11	188	12
Work of Art,	94	6	99	7
Work of Children under 12 years of age,	24	5	9	3
Special Premium by H. M. Whitney,	21	7	91	13
Grange Exhibit,	4	4	5	5
Total in Hall.	1350	27	1541	31

Grand total, 1778 entries from 27 out of 35 towns and cities in Essex County against 1809 entries from 31 cities and towns last year. Bradford, Essex, Hamilton, Ipswich, Manchester, Nahant, Salisbury and Wenham did not have exhibits this year. The entries were Amesbury, 35 ; Andover, 126 ; Beverly, 8 ; Boxford, 108 ; Danvers, 24 ; Georgetown, 14 ; Gloucester, 3 ; Groveland, 23 ; Haverhill, 43 ; Lawrence, 507 ; Lynn, 57 ; Lynnfield, 5 ; Marblehead, 21 ; Methuen, 214 ; Merrimac, 4 ; Middleton, 18 ; Newburyport, 36 ; Newbury, 110 ; North Andover, 290 ; Peabody, 49 ; Rockport, 1 ; Rowley, 11 ; Salem, 13 ; Saugus, 10 ; Swampscott, 3 ; Topsfield, 8 ; West Newbury, 37.

REPORT OF THE ANNUAL MEETING.

The annual meeting of the Society was held Tuesday, Sept. 27, at 10 o'clock, A. M., President Appleton presiding.

William S. Phillips, jr. was appointed secretary pro tem.

The marshals with Col. Melvin Beal of Lawrence as chief, were duly qualified.

Vacancies in committees were filled.

At 11 o'clock the election of officers for the ensuing year took place with the following result:

Whole number of ballots cast, 81.

For president, Francis H. Appleton had 81.

FOR VICE-PRESIDENTS.

James J. H. Gregory of Marblehead, had 80; Horatio G. Herrick of Lawrence, had 80; James P. King of Peabody, had 79; Oliver S. Butler of Georgetown, had 78.

FOR SECRETARY.

John M. Danforth of Lynnfield had 80 and was elected.

Voted, That the trustees of the Society be requested to consider the expediency of making different arrangements for the annual meeting of the Society, that we may have more time for the transaction of business.

Voted, To adjourn this meeting to the hall where the annual dinner is to be served, Wednesday, the 28th, subjec to the call of the president.

Wednesday, Sept. 28, after the annual dinner, President Appleton called the assemblage to order, and after a few introductory remarks introduced Mayor Doe of Lawrence, Hon. Moses T. Stevens of North Andover, Henry Cabot Lodge, Hon. William S. Knox, Hon. C. S. Mills, delegate from the state board, and others, all of whom made excellent remarks suitable to the occasion.

Voted, That the Society tender a vote of thanks to the Mayor and City Government of Lawrence, for the generous hospitality shown the Society, also to the citizens and all others who have aided to make the Fair a success.

Report of Committees.

1892.

FAT CATTLE.

The Committee on Fat Cattle have attended to their duty and respectfully report to the Secretary that they have made the following awards:

$8. First premium, to Shattuck Brothers, Lawrence, for fat oxen.

$6. Second premium, to J. P. Little, Amesbury, for fat oxen.

$7. First premium, to J. P. Little, Amesbury, for best fat ox.

$5. Second premium, to James C. Poor, No. Andover, for fat cow.

Charles H. Leach, E. A. Dane, James Noyes—*Committee.*

BULLS.

The Committee on Bulls have attended to their duty and respectfully report to the Secretary that they have made the following awards:

Diploma and $10. First premium, to J. D. W. French, No. Andover, for his Ayrshire bull, "Ravenwood."

$4. First premium, to J. D. W. French, No. Andover, for his Ayrshire bull, "Rosewood."

$2. First premium, to J. D. W. French, No. Andover, for Ayrshire bull calf.

$8. First premium, to E. C. Little, Haverhill, for his 2-year-old Holstein bull.

$2. First premium, to Plato Eames, Andover, for his Holstein bull, under 1 year.

$2. First premium, to James C. Poor, No. Andover, for Holstein bull calf.

$4. First premium, to S. S. Lewis, Lawrence, for yearling Jersey bull.

$2. First premium, to E. C. Little, Haverhill, for Jersey bull calf.

$8. First premium, to F. H. Foster, North Andover, for Guernsey bull, "Theseus of Avon."

John Swinerton, Edward Kent, S. W. Weston—*Committee.*

MILCH COWS.

The committee on Milch Cows have attended to their duty and respectfully report to the Secretary that they have made the following awards:

$15. First premium, to J. D. W. French, No. Andover, for the best cow of any age or breed, to his Ayrshire cow, "Nellie Day."

$10. First premium, to J. D. W. French, No. Andover, for best Ayrshire cow, to "Roxanna 8th."

$10. First premium, to J. Francis Gulliver, Andover, for his Jersey cow, "Young Petites Mere."

$10. First premium, to J. Francis Gulliver, Andover, for his Jersey cow, "Sadie de Bonair," for cow making most butter in one week.

$10. First premium, to James C. Poor, No. Andover, for his Holstein cow, "Lady Betts 2nd."

$10. First premium, to James C. Poor, No. Andover, for Grade Holstein cow, "Bessie."

$4. Second premium, to James C. Poor, No. Andover, for Grade Holstein cow, "Maude."

George L. Averill, Sherman Nelson, Charles Haseltine —*Committee.*

STATEMENT OF J. D. W. FRENCH.

"Nellie Day"	gave	in	the	year	1888—299	days	in	milk,	5988 lbs.
"	"	"	"	"	1889—273	"	"	"	6391 lbs.
"	"	"	"	"	1890—267	"	"	"	5949 lbs.
"	"	"	"	"	1891—333	"	"	"	7788 lbs.
					Total,				26116 lbs.

Average for 4 years, 6529 lbs. per year.

Feed—Summer pasturage—green fodder or grain, 2 to 4 qts. per day. Winter hay—8 qts., 8 qts. mangolds, 4 qts. bran, and 2 Linseed Oil meal.

Roxanna 8th, dropped Dec. 13th, 1884, Dam Roxanna, Sire 1816, Sire Rabens, 2696.

Yield in 1891—328 days, 7170 lbs. milk.

STATEMENT OF J. F. GULLIVER.

"Sadie de Bonair," born Feb. 13, 1888. Last calf June, 1892. Has milked in one day this summer 39 lbs., and in seven days made 12 lbs. 5 oz. butter; during that week her feed was pasture, and cut grass in stable with 2 quarts each corn meal, ground oats and bran, pint cotton seed meal, daily.

To Committee on Milch Cows: I enter for your consideration the Holstein-Fresian cow "Lady Betz, 2d, 9 years old, dropped last calf Sept. 22d, was dry about three weeks. Gave the first 10 days in January 1892, 350 lbs. milk, and first ten days in June she gave 255 lbs. milk.

Feed in winter, 12 qts. grain (3 parts bran, 2 parts cob meal and cotton seed meal), dry fodder, consisting of 1 part English hay, 1 part oat fodder, 1 part corn fodder, watered twice a day. Summer feed, 4 qts. bran, 2 qts. meal (corn).

Grade Holstein and Durham.

The grade cow "Maud" is 9 years old, dropped last calf Mar. 15th, is due March, '93. For the first ten days in June she gave 46 lbs. milk per day, and the last ten days in August she gave 34 lbs. milk a day.

Holstein and Ayrshire.

The grade "Bessie" is 5 years old, calved May 31st, 1892, is due in April, 1893; gave 478 lbs. milk in ten days in June (June 19th to 20th); first ten days in September, 360 lbs. milk; feed pasture, 2 qts. corn meal, 4 qts. bran; after August 1st, 3 qts. meal, 6 qts. bran, oat or corn fodder nights.

Respectfully submitted,

JAMES C. POOR.

HERDS OF MILCH COWS.

The Committee on Herds of Milch Cows have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$18. First premium, to Leverett Swan, Methuen, for 5 Grade Ayrshires.

$12. Second premium, to J. D. W. French, No. Andover, for 5 Ayrshire Cows.

Diploma and $15. First premium, to Charles J. Peabody, Topsfield, for greatest product of milk on any farm in one year, according to the number of cows.

STATEMENT OF LEVERETT SWAN.

I enter a herd of 5 grade Ayrshire cows giving 17,717 qts. of milk from Sept. 1, 1891 to Sept. 1, 1892, as follows:

"Lizzie," aged 9 years, calved July 3, 1892, gave in

Sept. 397 qts.	Jan. 341 qts.	May 195 qts.
Oct. 405 "	Feb. 309 "	July 496 "
Nov. 391 "	Mar. 321 "	Aug. 489 "
Dec. 363 "	April 306 "	

"Fairmaid," aged 8 yrs., calved Aug. 14, 1892, and gave in

Sept. 485 qts.	Jan. 349 qts.	May 256 qts.
Oct. 455 "	Feb. 314 "	June 223 "
Nov. 395 "	Mar. 293 "	July 106 "
Dec. 371 "	Apr. 285 "	Aug. 251 "

"Julia," aged 7 years, calved July 12, 1892, and gave in

Sept. 341 qts.	Jan. 252 qts.	May 216 qts.
Oct. 325 "	Feb. 240 "	June 72 "
Nov. 322 "	Mar. 235 "	July 214 "
Dec. 298 "	Apr. 227 "	Aug. 435 "

"Creeper," aged 7 years, calved Aug. 7, 1892, and gave in

Sept. 367 qts.	Jan. 245 qts.	May 235 qts.
Oct. 332 "	Feb. 226 "	June 246 "
Nov. 319 "	Mar. 231 "	July 28 "
Dec. 278 "	Apr. 216 "	Aug. 280 "

"Orphan," aged 7 years, calved Aug. 25, 1891, and gave in

Sept. 447 qts.	Jan. 353 qts.	May 271 qts.
Oct. 409 "	Feb. 299 "	June 247 "
Nov. 397 "	Mar. 336 "	July 197 "
Dec. 361 "	Apr. 305 "	Aug. 132 "

I bred and raised all but "Lizzie," and her I bought and raised but did not breed.

I feed brewery grains and 2 quarts of corn or gluten meal daily except May, June, July and August, and then I feed no meal. They also have green corn, fall feed and pasturage.

J. D. W. FRENCH'S STATEMENT.

I enter for a premium a herd of 5 Ayrshire cows, viz:

"Nellie Day," No. 6,745, A. R., 10 yrs. old; yield from Sept. 1, 1891 to Sept. 1, 1892, 7711 lbs. milk.

"Roxanna 8th," No. 8536, A. R., 7 yrs. old; yield from Sept. 1, 1891 to Sept. 1, 1892, 6419 lbs. milk.

"Maid Douglass," No. 11,529, A. R., 7 yrs. old; yield from Sept. 1, 1891 to Sept. 1, 1892, 6065 lbs. milk.

"Julia Max," No. 10,160, A. R., 7 yrs. old; yield from Sept. 1, 1891 to Sept. 1, 1892, 6061 lbs. milk.

"Princess Rose," No. 10,163, A. R., 4 yrs. old; yield from Sept. 1, 1891 to Sept. 1, 1892, 5532 lbs. milk.

Total yield, 31,788 lbs.

STATEMENT OF CHARLES J. PEABODY.

I enter for premium my herd of 12 cows, and averaging

10 in milk for the time covered by this statement, which is from Jan. 1, 1892 to Sept. 1, 1892; five of my cows I raised; all the herd are grade stock, mostly Jersey and Ayrshire, crossed with natives: six of the cows have calved since January, two were farrow, one dropped her first calf June 25th; the others came in last fall; but one exchange has been made; a fat cow was exchanged for a new milch one in March. I feed two parts meadow and salt hay to one part of English, to the amount of 20 to 25 lbs. per day, with from 4 to 7 quarts of shorts and meal to those in milk. After May 20 the hay and grain were left off, and pasture only was given until August 1st, since which time small potatoes and corn fodder have been fed.

The product of milk has been 16,636 quarts of milk, of which 14,196 quarts was sold, 1440 quarts used and 1000 quarts estimated fed to calves.

The value of milk sold, used and fed is $524.68.

The average value to each cow is $52.46.

The cost of keeping is estimated as follows:

Hay, $210. Grain, $80. Pasture, $70. Corn fodder and potatoes, $15. Total cost, $375. Profit, $149.68.

Respectfully submitted,

CHARLES J. PEABODY.

HEIFERS—PURE BRED.

The Committee on Heifers, Pure Bred, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$9. First premium, to J. D. W. French, No. Andover, for his Ayrshire heifer in milk "Fedalma 3rd," 3 yrs. old.

$5. First premium, to J. D. W. French, No. Andover, for Ayrshire heifer "Anomon," 1 year old.

$4. Second premium, to J. D. W. French, No. Andover, for Ayrshire heifer in milk "Fillippa 4th," aged 2 years.

$5. First premium, to E. C. Little, Haverhill, for Holstein heifer, 1 year old.

$5. First premium, to M. H. Connor, West Newbury, for Ayrshire heifer, "Fedalma 4th," 2 years old.

$5. First premium, to J. Francis Gulliver, Andover, for Jersey heifer, 2 years old.

$6. Second premium, to J. Francis Gulliver, Andover, for Jersey heifer in milk.

$5. First premium, to S. S. Lewis, Lawrence, for Holstein heifer, 3 years old.

$5. First premium, to S. D. Weston, Middleton, for Jersey heifer, 7 months old.

$5. First premium, to James C. Poor, No. Andover, for Holstein heifer "Berth Lincoln," 11 months old.

Henry A. Hayward, A. W. Peabody, E. G. Nason—*Committee.*

HEIFERS—NATIVE OR GRADE.

The Committee on Heifers, Native or Grade, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$5. First premium, to Plato Eames, Andover, for grade Holstein heifer, 10 months old.

$5. First premium, to W. S. Hughes, No. Andover, for grade Jersey heifer, 2 years old.

$9. First premium, to James C. Poor, No. Andover, for grade Holstein heifer in milk "Belle C," 2 years old.

$4. Second premium, to J. D. W. French, No. Andover, for grade Guernsey and Ayrshire "Topsy," 2 years old.

$4. Second premium, to J. D. W. French, No. Andover, for grade Guernsey and Ayrshire "Brownie," 7 months old.

$4. Second premium, to Daniel A. Carlton, No. Andover, for grade Holstein heifer, 1 year old.

$5. First premium, to George Ripley, Andover, for grade Jersey heifer, 1 year old.

$6. Second premium, to George L. Burnham, No. Andover, for grade Holstein in milk, 3 years old.

Charles J. Peabody, Walter H. Hayes, Samuel T. Poor —*Committee.*

WORKING OXEN AND STEERS.

The Committee on Working Oxen and Steers, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

$12. First premium, to B. H. Farnham, No. Andover, for working oxen.

$10. Second premium, to Daniel A. Carlton, No. Andover, for working oxen.

$8. Third premium, to Wm. P. Christopher, Middleton, for working oxen.

$10. First premium, to J. P. Little, Amesbury, for working steers.

C. K. Ordway, N. S. Harris, D. G. Chapman—*Committee.*

STEERS.

The Committee on Steers have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$5. First premium to Daniel Ingalls, No. Andover, for pair of twin yearling steers.

$6. Second premium to Wm. P. Christopher, Middleton, for pair of 3 year old steers.

$4. First premium to Benj. W. Farnham, No. Andover, for pair of steer calves, 2 mos. old.

James J. Abbott, Abel Stickney, D. D. Adams, R. Jaques—*Committee.*

TOWN TEAMS.

The Committee on Town Teams have attended to their duty, and respectfully report to the Secretary that they have made the following award:

$20. First premium, to North Andover Town Team, 13 pairs of horses.

T. P. Harriman, Frank W. Lyford, Richard Newell —*Committee.*

STALLIONS FOR DRIVING PURPOSES.

The Committee on Stallions for driving purposes have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$15. and diploma to Joseph Stowell, Lawrence, for bay stallion "Creditor" with five colts of his stock.

$10. First premium, to Edward J. Castle, Lawrence, for bay Morgan stallion, "Levi," 4 years old.

$8. First premium, to Mrs. J. J. Downing, Andover, for black Hambletonian stallion, 3 years old.

$6. Second premium, to W. S. Messerve, Haverhill, for seal brown stallion, "Little Phil."

$5. Second premium, to Rufus Goodwin, Haverhill, for black stallion, "Owessa," 3 years old.

$4. Third premium, to A. J. Connor, Lawrence, for Fearnaught stallion, "Ned C." 13 years old.

W. F. Kinsman, W. A. Keleher, John Flye—*Committee.*

BROOD MARES—FARM AND DRAFT PURPOSES.

The Committee on Brood Mares for farm and draft purposes have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$10. First premium, to Leverett Swan, Methuen, for chestnut mare, "Gypsey," weight 1200 lbs.

$6. Second premium, to John H. George, Methuen, for chestnut mare, "Nell," weight 1250 lbs.

$4. Third premium, to S. F. Newman, Newbury, for bay mare.

Henry H. Demsey, Thomas Sanders, Edw. Harrington, Joseph H. Blunt—*Committee.*

BROOD MARES—DRIVING PURPOSES.

The Committee on Brood Mares for driving purposes have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$10. First premium, to J. G. McAllister, Lawrence, for brood mare.

$6. Second premium, to George B. Parkhurst, Boxford, for bay mare.

$4. Third premium, to Arthur H. Messerve, No. Andover, for brown Morgan mare.

O. S. Butler, M. B. Chesley, Story D. Pool—*Committee.*

FAMILY HORSES.

The Committee on Family Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$10. First premium, to M. C. Andrews, Andover, for brown mare, "Princess."

$6. Second premium, to M. H. Connor, West Newbury, for mare, "Nellie."

$4. Third premium, to J. M. Smith, Lawrence, for brown Morgan mare, "Jessie."

O. S. Butler—*for the Committee.*

GENTS' DRIVING HORSES.

The Committee on Gentlemen's Driving Horses have

attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$10. First premium, to E. L. Barnes, Methuen, for chestnut mare.

$6. Second premium, to Isaac C. Brown, Methuen, for driving horse.

$4. Third premium, to George L. Burnham, No. Andover, for driving horse.

O. S. Butler—*for the Committee.*

SINGLE FARM HORSES.

The Committee on Single Farm Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$10. First premium, to Michael Dwyer, Methuen, for Percheron mare, weight 1350 lbs.

$6. Second premium, to John H. Perkins, Lynnfield, for bay mare, weight 1250 lbs.

$4. Third premium, to M. H. Poor, West Newbury, for farm horse, weight 1300 lbs.

$10. First premium, to J. D. W. French, North Andover, for mare, "Kitty," weight 1100 lbs.

$6. Second premium, to Fred Symonds, North Andover, for horse, weight, 975 lbs.

$4. Third premium, to Richard Newell, West Newbury, for brown mare, weight 1100 lbs.

Nathan F. Abbott, David Warren, O. L. Carlton, E. S. Keyes, E. A. Emerson—*Committee.*

PAIRS OF FARM HORSES WEIGHING OVER 2500 LBS.

The Committee on Pairs of Farm Horses weighing over 2500 lbs. have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$10. First premium, to George E. Kline, Lawrence, for pair of horses, weighing 2525 lbs.

$8. Second premium, to Carlton Little, Newbury, for pair of horses, weighing 2525 lbs.

E. P. Barrett, John Barker, B. F. Barnes—*Committee.*

PAIRS OF FARM HORSES WEIGHING LESS THAN 2500 LBS.

The Committee on Pairs of Farm Horses weighing less than 2500 lbs. have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$10. First premium, to Mrs. J. J. Downing, Andover, for pair of horses, weighing 2100 lbs.

$8. Second premium, to James C. Poor, No. Andover, for pair of horses, weighing 2400 lbs.

H. K. Webster, S. D. Hood—*for the Committee.*

COLTS FOR FARM AND DRAFT PURPOSES.

The Committee on Colts for Farm and Draft purposes have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$6. First premium, to John H. George, Methuen, for yearling colt.

$8. First premium, to John Barker, No. Andover, for 2 year old.

$8. First premium, to R. T. Jaques jr., Newbury.

$5. Second premium, to M. H. Connor, West Newbury.

$5. Second premium, to Woodbury Smith, Rowley.

$3. Second premium, to P. Averill, Lawrence.

$3. Third premium, to E. C. Little, Haverhill.

Richard Newell, John W. Lovett, D. D. Adams—*Committee.*

COLTS FOR DRIVING PURPOSES, THREE AND FOUR YEARS OLD.

The Committee on Colts for Driving purposes, three and four years old, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$8. First premium, to Alfred Thorp, Methuen, for four year old colt.

$5. Second premium, to M. H. Conner, West Newbury, for four year old colt.

$6. First premium, to John H. Perkins, Lynnfield, for three year old colt.

$3. Second premium, to J. G. McAllister, Lawrence, for three year old bay colt.

J. H. Nason, D. Bradstreet—*for the Committee.*

COLTS FOR DRIVING PURPOSES ONE AND TWO YEARS OLD.

The Committee on Colts for driving purposes one and two years old have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$8. First premium, to Woodbury Smith, Rowley, for mare colt, 2 years old.

$5. Second premium, to Chas. W. Mann, Methuen, for two year old colt.

$5. First premium, to G. H. Hanscom, Haverhill, for colt, 16 months old.

$3. Second premium, to J. H. Nason, Boxford, for bay yearling colt.

James C. Poor, J. W. Chadwick, Walter F. Gould, Albert Berry, John W. Allen—*Committee.*

SWINE—LARGE BREEDS.

The Committee on Swine, large breeds, have attended to

their duty, and respectfully report to the Secretary that they have made the following awards:

$8. First premium, to Alfred G. Playdon, Andover, for Chester white sow and pigs.

$8. First premium, to J. G. McAllister, Lawrence, for Chester white boar.

$8. First premium, to M. B. Chesley, Amesbury, for Cheshire breeding sow.

$5. Second premium, to M. B. Chesley, Amesbury, for Cheshire boar.

$8. First premium, to M. B. Chesley, Amesbury, for 8 weaned pigs.

$8. First premium, to Milo H. Gould, Andover, for Cheshire boar.

$8. First premium, to Richard Newell, West Newbury, for 9 weaned Cheshire pigs.

$8. First premium, to W. L. Hill, Peabody, for Yorkshire sow and 7 pigs.

$2. Second premium, to W. L. Hill, Peabody, for Yorkshire sow and 10 pigs.

$5. Second premium, to W. L. Hill, Peabody, for Chester white boar.

$5. Second premium, to Isaac C. Brown, Methuen, for 10 Chester weaned pigs.

$5. Second premium, to Isaac C Brown, Methuen, for Yorkshire boar.

J. S. Crosby, E. G. Nason, G. W. Sargent, J. H. Chandler— *Committee.*

SWINE—SMALL BREEDS.

The Committee on Swine, small breeds, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$8. First premium, to J. D. W. French, No. Andover, for small Yorkshire boar, "Boxford," Reg. No. 739.

$8. First premium, to J. D. W. French, No. Andover, for small Yorkshire sow and pigs, "Katie Belle," Reg. No. 1327.

F. H. Appleton, Aaron Sawyer, Charles H. Preston —*Committee.*

SHEEP.

The Committee on Sheep have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$10. First premium, to Richard Newell, West Newbury, for 10 grade South-down ewes.

$8. First premium, to J. D. W. French, No. Andover, for best buck.

$6. Second premium, to J. D. W. French, No. Andover, for 10 grade Shropshire ewes.

N. W. Moody, M. H. Connor, Chas. S. Bartlett—*Committee.*

POULTRY.

The Committee on Poultry have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$2. First premium, to P. Hoogerziel, Beverly, for Pekin bantam fowls.

$1. Second premium, to P. Hoogerziel, Beverly, for Pekin bantam chicks.

$2. First premium, to Lewis C. Wentworth, No. Andover, for trio of Pitt game fowls.

$2. First premium, to B. S. Smith, jr., Andover, for trio bantam chicks.

$2. First premium, to B. S. Smith, jr., Andover, for pair Polish chicks.

$2. First premium, to E. C. Little, Haverhill, for pair Guinea chicks.

$1. Second premium, to M. W. Kitchen, Lawrence, for pair of Pitt game fowls.

$2. First premium, to M. W. Kitchen, Lawrence, for pair of red Pitt muff fowls.

$2. First premium, to Leander F. Brown, West Newbury, for coop of S. L. Wyandotte fowls.

$2. First premium, to Leander F. Brown, West Newbury, for coop of S. L. Wyandotte chicks.

Diploma, to Frank E. Dresser, Lawrence, for Partridge Cochin fowls.

$2. First premium, to Frank E. Dresser, Lawrence, for Partridge Cochin chicks.

$2. First premium, to Frank E. Dresser, Lawrence, for dark Brahma fowls.

$1. Second premium, to John L. Noyes, Andover, for Pekin ducklings.

$1. Second premium, to A. M. Whittier, No. Andover, for bantam hen, 4 chicks.

$2. First premium, to J. E. Leaver, Methuen, for dark Brahmas.

$1. Second premium, to Nathan Foster, Andover, for Brahma fowls.

$2. First premium, to R. B. Smith, No. Andover, for White Leghorns.

$1. Second premium, to R. B. Smith, No. Andover, for White Leghorn chicks.

$2. First premium, to R. B. Smith, No. Andover, for White Plymouth Rocks.

$1. Second premium, to R. B. Smith, No. Andover, for Dark Brahmas.

$2. First premium, to R. B. Smith, No. Andover, for Indian game fowls.

$2. First premium, to R. B. Smith, No. Andover, for Pekin ducks.

$1. Second premium, to R. B. Smith, No. Andover, for Pekin ducks.

$2. First premium, to S. J. Baker, Methuen, for Blue Andalusian chicks.

$2. First premium, to John Turner, Methuen, for Black Spanish fowls.

$1. Second premium, to John Turner, Methuen, for Black Spanish chicks.

$2. First premium, to Isaac M. Laney, Methuen, for Barred Plymouth Rocks.

$2. First premium, to Frank W. Webster, Methuen, for Barred Plymouth Rocks.

$2. First premium, to Frank W. Webster, Methuen, for Buff Cochin chicks.

$2 and Diploma, to Frank W. Webster, Methuen, for pen and pair of Buff Leghorns.

$1. Gratuity, to Frank W. Webster, Methuen, for pigeons.

$1. Second premium, to H. D. Jenkins, Andover, for pen White Leghorn chicks.

$2. First premium, J. O. Connor, West Newbury, for Brown Leghorn Rose Combs.

$1. Second premium, to Ernest L. Holt, Lawrence, for Partridge Cochin fowls.

$1. Second premium, to Ernest L. Holt, Lawrence, for Partridge Cochin chicks.

$2. First premium, to Ernest L. Holt, Lawrence, for White Pekin ducklings.

$2. First premium, to John E. Davis, Methuen, for Barred Plymouth rocks.

$2. First premium, to L. B. Hawkes, Saugus, for pair bronze turkeys.

$2. First premium, to L. B. Hawkes, Saugus, for Black Breasted Red game.

$2. First premium, to L. B. Hawkes, Saugus, for Guinea fowls.

$2. First premium, to L. B. Hawkes, Saugus, for Toulouse geese.

$1. Second premium, to L. B. Hawkes, Saugus, for Toulouse geese.

$2. First premium, to L. B. Hawkes, Saugus, for Embden geese.

$2. First premium, to L. B. Hawkes, Saugus, for Dark Brahma fowls.

$2. First premium, to Anson L. Griffin, Lawrence, for Brown Leghorn fowls.

$1. Second premium, to Anson L. Griffin, Lawrence, for Barred Plymouth Rocks.

$2. First premium to Anson L. Griffin, Lawrence, for White Wyandotte fowls.

$2. First premium, to Anson L. Griffin, Lawrence, for Indian game fowls.

$2. First premium, to Anson L. Griffin, Lawrence, for Mottled Anconas.

$2. First premium, to Anson L. Griffin, Lawrence, for Black Minorcas.

$1. Second premium, to Anson L. Griffin, Lawrence, for Indian Game chicks.

$1. Second premium, to Anson L. Griffin, Lawrence, for Mottled Anconas.

Diploma, to Anson L. Griffin, Lawrence, for breeding pen of Mottled Anconas.

$1. Second premium, to Anson L. Griffin, Lawrence, for Ancona chicks.

$1. Second premium, to Geo. B. Parkhurst, Boxford, for Light Brahmas.

$2. First premium, to James F. Holland, Andover, for Plymouth Rock chicks.

$2. First premium, to Homer Dow, Methuen, for Plymouth Rock fowls.

$1. Second premium, to Homer Dow, Methuen, for Plymouth Rock chicks.

$2. First premium, to Homer Dow, Methuen, for Brahma chicks.

$2. Frist premium, to John F. Jackson, Georgetown, for White Wyandottes.

$1. Second premium, to Edward McLaughlin, Methuen, for White Wyandottes.

$1. Second premiums, to Edward McLaughlin, Methuen, for White Wyandotte chicks.

John Swinerton, W. H. Butters—*for the Committee.*

PLOUGHING WITH DOUBLE TEAMS.

The Committee on Ploughing with Double Teams have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$10. First premium, to J. P. Little, Amesbury, for 2 pair of oxen with Varney Clipper Plough, No. 2.

$8. Second premium, to B. H. Farnham, No. Andover, for Eagle Plough, No. 2.

Amos Haseltine—*for the Committee.*

PLOUGHING WITH SINGLE OX TEAMS.

The Committee on Ploughing with Single Ox Teams have attended to their duty, and respectfully report to the Secretary that they have made the following award:

$10. First premium, to Wm. P. Christopher, Middleton, for Landside plough.

Sherman Nelson, A. P. Fuller—*for the Committee.*

PLOUGHING WITH SWIVEL PLOUGH.

The Committee on Ploughing with Swivel Ploughs have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$10. First premium, to Daniel A. Carlton, No. Andover, for 1 pair oxen.

$8. Second premium, to Lyman S. Wilkins, Topsfield, for 1 pair oxen.

$10. First premium, to F. A. Russell, Methuen, for Victor, No. 2, with pair of horses.

$8. Second premium, to Isaac C. Brown, Methuen, for Yankee plough, pair of horses.

Jos. S. Howe, S. H. Bailey, Joseph N. Rolf—*Committee.*

PLOUGHING WITH HORSES ANY PLOUGH EXCEPT SWIVEL.

The Committee on Ploughing with Horses any Plough except Swivel have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

$10. First premium, to Carlton Little, Newbury, for Hussey plough, No. 106.

$7. Second premium, to Fred Poor, West Newbury, for Hussey plough, No. 106.

$5. Third premium, to E. C. Little, Haverhill, for the Frye steel plough.

S. F. Newman, E. Harrington, J. W. Chadwick, T. P. Harriman—*Committee.*

PLOUGHING WITH SULKY PLOUGH.

The Committee on Ploughing with sulky ploughs have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

$10. First premium, to F. A. Russell, Methuen, for Syracuse sulky.

$8. Second premium, to George E. Kline, Lawrence, for Syracuse sulky.

The Committee wish to mention Mr. E. C. Little's son of Haverhill, 9 years of age who ploughed with a sulky plough, who did commendable work and is entitled to merit; the Committee would like to have given him a premium but with only two at their disposal, could not do so and do justice to others.

Samuel T. Poor, David M. Cole, John W. Frederick—*Committee.*

PLOUGHING WITH THREE HORSES.

The Committee on Ploughing with three horses have at-

tended to their duty and respectfully report to the Secretary that they have made the following award:

$10. First premium, to M. H. Connor, West Newbury, for improved Doe plough.

S. S. Lewis, George E. Johnson, Milo H. Gould—*Committee.*

HARROWS.

The Committee on Harrows have attended to their duty, and respectfully report to the Secretary that they have made the following award:

$10. First premium, to James C. Poor, No. Andover, for trial of the Eureka Spring Tooth Harrow.

J. Webb Barton, A. P. Russell—*for the Committee.*

AGRICULTURAL IMPLEMENTS.

The Committee on Agricultural Implements have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$10. and Diploma to the Treat Hardware Co., of Lawrence, for collection of implements.

$5. First premium, to J. M. Graham, Methuen, for market wagon.

$5. First premium, to Geo. E. Daniels, Rowley, for two horse cart.

$3. First premium, to S. J. Pedler, Methuen, for two horse farm wagon.

$5. Gratuity, to Dole & Osgood, Peabody, for milk wagon.

$2. Gratuity, to S. J. Pedler, Methuen, for set of Archibald wheels and axles.

$1. Gratuity, to Joseph D. Dodge, Rowley, for set of marsh shoes.

$1. Gratuity, to P. Hoogerziel, Beverly, for patent wheelbarrow for apples.

S. W. Hopkinson—*for the Committee.*

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CARRIAGES.

The Committee on Carriages have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$5. and Diploma to Means & Hopkins, Merrimac, for open beach wagon.

$5. Gratuity, to H. B. Whipple, Peabody, for delivery wagon.

$5. Gratuity, to D. M. Lane, Lawrence, for 3 spring grocery wagon.

$2. Gratuity, to Kress Bros., Lawrence, for buggy.

$1. Gratuity, to Kress Bros., Lawrence, for Democrat wagon.

$5. Gratuity, to J. W. Joyce, Lawrence, for beer wagon.

George E. Daniels, B. F. Lewis, J. H. Blunt—*Committee.*

IN EXHIBITION HALL.

REPORT OF SUPERINTENDENT.

The Exhibition of the Society at the City Hall, Lawrence, Sept. 1892, though not as well patronized as last year, was on the whole, a decided success. Owing to the busy times at the different Corporations, it was impossible to interest them in the fair, so the exhibit in this line was not as large as last year, nor did they give their operatives a half holiday, which I think took off some from the receipts. Only one mill made an exhibit of a fine line of Ladies' dress goods.

The space allotted to the merchants and small manufacturers was well taken up and filled with articles of interest to the public.

The special premium offered by H. M. Whitney, for the exhibit of the most value, to the Lawrence Hospital, brought a very large and varied collection of articles that were of special use to them, the whole amounting to a very nice sum.

The fancy work was so crowded in the cases that the society own that it was impossible for the committee to judge of the merits of many of the exhibits or for the public to see much of the fine work that was displayed. The number of entries in this department was not quite as large as last year but I think the amount was larger, as many ladies entered several articles under one number which I think was a mistake and I did not notice it until the entries were all in.

There was more interest taken by the children this year

as it was more fully understood by them that premiums were given for such work.

There was a very good showing of cut flowers but not many plants, also several collections of wild flowers which showed a great amount of work in collecting and classifying.

The stage was well filled by J. B. Hally with a fine collection of ferns.

Edward Flynn made a very good showing in the gallery of potted plants and flowers.

Some of the fruit entered was of excellent quality but much of it is entered more for the purpose of receiving an entrance ticket than for a premium.

The amount was about the same as last year, the pear exhibit was of good quality, and the table of peaches, grapes and assorted fruit was well filled, many varieties of excellent quality not being found on the premium list of the society, but worthy of culture, and always found in the markets.

The vegetable department was not as well filled as last year but most of the articles exhibited were of merit. This department was well looked after by Mr. Bradley, and the arrangement made a very good showing.

By the kindness of the mayor the council chamber was again opened for our use as an art room, where valuable pictures and decorated china ware could be exhibited safely and apart from the bustle and crowd of the main hall, and where lovers of the beautiful could better examine the very fine exhibit which filled the room, being much larger and finer than last year.

The grange exhibit was a good agricultural show in itself, in a very small space was gathered together from four towns, a collection of fruit, vegetables and ladies' work, the abundance of which shows willing hands, and the arrangement something of the work of the grange in matters of higher education.

Some have thought that this special grange exhibit takes

away from the main hall, but I know that many entries were made both years in the hall and on the exhibition grounds by members of our granges, who would never have taken any interest in the fair if it had not been for the grange and the interest felt at our meetings, thus by the discussion advertising the fair to a great extent.

I think the society would reap great benefits if they more fully advertised the different premiums offered, especially in the hall, as where it comes so seldom to a place the people forget, and new ones are continually coming in to our cities, so they do not understand, especially the foreign element, some of whom take a great interest when permitted to take part.

To the ladies and gentlemen with the assistant superintendent, I owe many thanks, for the cheerful response to the call, and the faithful manner in which they attended to the arranging of the many entries, and if some way could be devised, so we could know, who of the committee of awards could not be present, so their places could be promptly filled, the duties of the superintendent would be lightened.

W. C. ALLYN, *Superintendent of Hall.*

DAIRY.

The Committee on Diary have attended to their duty and respectfully report to the Secretary that they have made the following awards:

$10. First premium to Oscar Gowen, West Newbury, for the Dairy Cow making the most butter the first week in June, July, Aug. and Sept.

$5. First premium to Mrs. Wm. K. Cole, Boxford, for 5 lbs. butter.

$6. Second premium to Mrs. Chas. W. Gowen, West Newbury, for 5 lbs. butter.

$4. Third premium to M. B. Chesley, Amesbury, for 5 lbs. butter.

DRESSED FOWLS AND EGGS.

$2. First premium to Mrs. Susan A. Stuart, Middleton, for 1 pair dressed fowls.

$1. First premium to Mrs. Susan A. Stewart, Middleton, for 1 doz. Brahma eggs.

$1. First premium to Wm. M. Cole, Boxford, for 1 doz. Wyandotte hens eggs.

$1. First premium to Wm. M. Cole, Boxford, for 1 doz. Plymouth Rock hens eggs.

$1. First premium to Wm. M. Cole, Boxford, for 1 doz. Red Cap hens eggs.

Charles Perley, Mrs. David Warren, Mrs. B. H. Farnham, Mrs. T. C. Thurlow—*Committee.*

STATEMENT OF OSCAR GOWEN.

To the Committee on Diary.

The cow I wish to enter for the premium for the first week in June, July, August and Sept. for amount of butter from any quantity of milk is a grade Ayrshire. She dropped her last calf the 21st day of January, 1892.

1st week in June she gave 184 lbs. of milk, which made 10 lbs. of butter, her feed was grass with one quart of corn meal a day.

1st week in July she gave 147 lbs. of milk, which made 8½ lbs. butter, her feed was the same as June.

1st week in August she gave 144 lbs. of milk which made 8 lbs. of butter, her feed was grass with one quart of cotton seed meal in place of corn meal.

1st week in Sept. she gave 165 lbs. of milk which made 9 lbs. of butter, her feed was 2 quarts corn meal, grass and corn fodder.

STATEMENT OF MRS. WM. K. COLE.

The 5 lbs. of butter entered for premium was made from milk of grade Jersey cows, set in pans standing 36 to 40 hours, churned when enough cream has accum-

ulated for a churning, is rinsed through two waters, then thoroughly worked, salted at the rate of one ounce to a lb. of butter, and immediately put up for market. Cows have a run of pasture and some green feed in the barn and one quart of meal per day.

STATEMENT OF MRS. O. W. GOWEN.

My butter entered for a premium is made from a grade Jersey cow fed upon what she gets from the pasture, without any grain. The milk is set in tin pans about one half full, then skimmed in 36 hours, when enough cream is collected, churn, wash and salt at the rate of one ounce to the pound.

BREAD AND CANNED FRUIT.

The Committee on Bread and Canned Fruit have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$3. First premium to Ellen Condon, Beverly, for wheat bread.

$2. First premium to Ellen Condon, Beverly, for graham bread.

$3. First premium to Mrs. A. C. Wilson, Danvers, for preserves and jelly.

$3. First premium Mrs. Ella J. Andrew, Boxford, for basket of dried apples.

$2. First premium to Miss M. J. Wilson, Methuen for case of canned fruit.

$2. First premium to Mrs. B. H. Farnham, No. Andover, for 5 lbs. of dried apples.

$2. First premium to Mrs. Carrie Wales, Groveland, for loaf of white and graham bread.

$1.50. First premium to Miss Clara L. Bailey, Andover, for brown bread.

$1. Second premium to Mrs. Oscar Young, No. Andover, for brown bread.

$1. Second premium to Mrs. Geo. L. Burnham, No. Andover, for loaf of white and graham bread.

$1. Third premium to Mrs. Edwin Haseltine, Haverhill, for loaf of white, graham and brown bread.

$1. Gratuity to Page Catering Co., Lawrence, for case of bread and cake.

50c. Gratuity to J. T. Remmens, Lawrence, for case of bread.

50c. Gratuity to Misses Prescott, Lawrence, for 12 tumblers jelly.

50c. Gratuity to Mrs. M. N. Howe, Lawrence, for loaf of white bread.

50c. Gratuity to Mrs. A. M. Brown, Lawrence, for loaf of cake.

50c. Gratuity to Mrs. E. F. Holt, Andover, for canned pears.

The Committee on Bread labored under a great disadvantage as the best looking bread was not tasted, as it was entered without a statement, which excluded it from a premium, and as the exhibitors were probably not aware that a statement was required, felt that justice was not done them. Therefore the Committee would recommend that another year the fact be made known in some way, so that exhibitors shall have their statements and relieve the Committee from blame.

Mrs. J. Henry Hill, Elizabeth P. Nichols, Mrs. J. H. Chandler —*Committee.*

STATEMENT OF MRS. ELLEN CONDON FOR GRAHAM BREAD.

1 quart graham flour, 3 qts. white flour, 1 cup sugar, 1 large spoonful salt, 1 yeast cake. Do not sift the graham, mix the same as any bread, bake in a quick oven one hour and ten minutes, cover the bread with brown paper the first 20 minutes.

STATEMENT OF MRS. CARRIE B. WALES, RAISED WHEAT BREAD.

1 quart Haxall flour, one half pint warm water, one half pint milk scalded, one half compressed yeast cake, 2 teaspoonfuls sugar, 2 teaspoonfuls salt, 1 teaspoonful lard. Knead at night, let rise until morning, chop down with a knife in the morning, let rise in pan until light, put in tin and let rise till twice its size and bake 45 minutes.

STATEMENT OF MRS. OSCAR YOUNG, BROWN BREAD.

One half cup of flour, one cup of corn meal, two cups rye meal, measure rye before sifting, two teaspoonfuls soda heaped, nearly a cup of molasses, one pint sour milk, teaspoonful salt, steam nearly all day.

STATEMENT OF MRS. GEO. L. BURNHAM, GRAHAM BREAD.

The kind of flour used is the Arlington graham, one quart of flour, one pint of milk, three tablespoonfuls sugar, one half teaspoonful of salt, one fourth yeast cake, mixed stiff with a spoon, let rise over night, then put in tins, let stand half an hour, then bake one hour.

STATEMENT OF LIZZIE J. WILSON, FOR CANNED PEARS AND PEACHES.

I make a syrup of one part water and two parts sugar and let it boil ten minutes, then throw in one half cup cold water three times and boil five minutes longer and it is then ready for the fruit. The fruit I peel and throw in a pan of cold water until I have enough to start with, then I cook in boiling water until they are easily pierced with a straw, then let them simmer a few minutes in the syrup in the bottle. Plums and most all other fruit I cook in the same kind of syrup until they look clear.

STATEMENT OF MISS M. J. WILSON FOR CANNED FRUIT.

To every quart jar, one cup of sugar, boil until clear, then drop fruit in and cook until clear; this applies to most all fruit.

SPECIAL PREMIUM OFFERED BY H. M. WHITNEY & CO.

The Committee on Special Premium offered by H. M. Whitney & Co., for the benefit of the Hospital, have attended to their duty, and respectfully report to the Secretary that they have made the following award:

$15. First premium to Whitall, Taturn & Co., for glass ware and sundries.

Mrs. O. T. Howe, Mrs. Moses Stevens, Mrs. Geo. W. Sargent, Miss C. E. M. Somerville, F. E. Clarke, Dr. C. N. Chamberlain, Dr. C. G. Carlton—*Committee.*

PEARS.

The Committee on Pears have attended to their duty and respectfully report to the Secretary that they have made the following awards:

$3. First premium, to Edwin Bates, Lynn, for Bartlett pears.

$3. First premium, to Edwin Bates, Lynn, for Bosc pears.

$3. First premium, to Edwin Bates, Lynn, for Lawrence pears.

$3. First premium, to Edwin Bates, Lynn, for Louise Bonne pears.

$3. First premium, to Edwin Bates, Lynn, for Howell pears.

$6. First premium, to Edwin Bates, Lynn, for collection of pears.

$3. First premium, to J. J. H. Gregory & Son, Marblehead, for Belle Lucrative pears.

$3. First premium, to Jas. J. H. Gregory & Son, Marblehead, for Paradise d'Automne pears.

$3. First premium, to Wm. Burke Little, Newbury, for Anjou pears.

$3. First premium, to J. W. Goodell, Lynn, for Angouleme pears.

$3. First premium, to W. P. Hutchinson, Danvers, for Dana's Hovey pears.

$3. First premium, to James Wilson, Topsfield, for Onondago pears.

$3. First premium, to Frederic Samson, Salem, for Seckle pears.

$3. First premium, to Robert Lindsay, Lawrence, for Sheldon pears.

$3. First premium, to H. G. Herrick, Lawrence, for Urbaniste pears.

$3. First premium, to S. J. Richards, Lawrence, for Vicar of Wakefield pears.

$3. First premium, to Elizabeth McIntire, Lawrence, for Cornice pears.

$3. First premium, to Geo. W. Marsden, Lawrence, for Clairgeau pears.

$1. Gratuity, to Abel Stickney, Groveland, for Belle Lucrative pears.

$1. Gratuity, to Allen Barr, Lawrence, for Buerre Bosc pears.

$1. Gratuity, to Allen Barr, Lawrence, for Dana's Hovey pears.

$1. Gratuity, to Edwin Bates, Lynn, for Anjou pears.

$1. Gratuity, to Edwin Bates, Lynn, for Sheldon pears.

$1. Gratuity, to Edwin Bates, Lynn, for Vicar pears.

$1. Gratuity, to Lester E. Prescott, Lawrence, for Angouleme pears.

$1. Gratuity, to Walter B. Allen, Lynn, for Lawrence pears.

$1. Gratuity, to Walter B. Allen, Lynn, for Urbaniste pears.

$1. Gratuity, to Alice McIntire, Lawrence, for Seckle pears.

$1. Gratuity, to Wm. Burke Little, Newbury, for Clairgeau pears.

$1. Gratuity, to B. Flanders, Haverhill, for Buerre Hardy pears.

Peter M. Neal, B. F. Huntington, Edmund Gale—*Committee.*

APPLES.

The Committee on Apples have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$3. First premium, to D M. Cole, Boxford, for Gravenstein apples.

$3. First premium, to E. P. Noyes, Newbury, for Roxbury Russetts.

$3. First premium, to Mrs. D. G. Berry, No. Andover, for Sweet Baldwins.

$3. First premium, to John Taylor, Amesbury, for Rhode Island Greening.

$3. First premium, to T. K. Bartlett, Newburyport, for Drap D'Or.

$3. First premium, to J. Henry Hill, Amesbury, for King of Tompkins.

$3. First premium, to J. Henry Hill, Amesbury, for Bailey's Sweet.

$3. First premium, to J. Henry Hill, Amesbury, for Smith's Cider.

$3. First premium, to David Warren, Swampscott, for Pickman Pippin.

$3. First premium, to S. G. Bailey, West Newbury, for Hubbardston.

$3. First premium, to Wm. S. Horner, Georgetown, for Canada Snow.

$3. First premium, to C. M. Lunt, Newbury, for Hunt's Russett.

$3. First premium, to C. M. Lunt, Newbury, for Red Russett.

$3. First premium, to E. T. Childs, Lawrence, for Porter.

$3. First premium, to Lyman Osborne, Peabody, for Danvers Sweet.

$3. First premium, to Nathan Longfellow, Groveland, for Baldwin.

$2. Second premium, to William Little, Newbury, for Roxbury Russett.

$1.50. Second premium, to S. B. George, Groveland, for Hunt's Russett.

$1.50. Second premium, to C. M. Lunt, Newbury, for Baldwin.

$1.00. Gratuity, to N. R. Fowler, Boxford, for Monmouth Pippin.

$1.00. Gratuity, to S. M. Bailey, Andover, for Red Porter.

$1.00. Gratuity, to Michael Shea, Lawrence, for Gravenstein,

$1.50. Gratuity, to Geo. W. Chadwick, Boxford, for Killam Hill.

$1.00. Gratuity, to Wm. Burke Little, Newbury, for McIntosh Red.

$1.50. Gratuity, to B. F. Huntington, Amesbury, for Northern Spy.

$1.00. Gratuity, to E. K. Noyes, Newbury, for Bradford Nonsuch.

$1.50. Gratuity, to J. N. Rolf, Newbury, for Maiden's Blush.

$1.50. Gratuity, to B. Griffin, Lawrence, for Gilliflower.

$1.00. Gratuity, to S. B. Bodwell, No. Andover, for President apple.

$1.50. Gratuity, to D. Bradstreet, Topsfield, for Pickman Pippin.

$1.00. Gratuity, to G. D. Walton, Peabody, for Hass apple.

$1.50. Gratuity, to G. D. Walton, Peabody, for Unknown.

The apple classed as "unknown" is reported to be worthy of the attention of the society, both for its keeping quality and excellent flavor, as reported by Andrew Nichols of Danvers, and your committee have taken this method of introducing it to your notice.

W. H. B. Currier, Andrew Nichols, W. P. Hutchinson—*Committee.*

PEACHES, GRAPES AND ASSORTED FRUIT.

The Committee on Peaches, Grapes and Assorted Fruit have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$2.00. First premium, to Edwin Bates, Lynn, for White Flesh peach.

2.00. First premium, to Geo. W. Chadwick, Boxford, for Seedling peach.

2.00. First premium, to Wm. L. Hobbs, Lawrence, for Crawford peach.

3.00. First premium, to C. D. Thompson, No. Andover, for Concord grapes.

3.00. First premium, to Maggie Shea, Lawrence, for White Martha grapes.

4.00. First premium, to James M. Teel, Lynn, for Black Hamburg grapes.

3.00. First premium, to W. P. Hutchinson, Danvers, for Moore's Early grapes.

3.00. First premium, to W. P. Hutchinson, Danvers, for Niagara grapes.

3.00. First premium, to W. P. Hutchinson, Danvers, for Brighton grapes.

1.50. Gratuity to W. P. Hutchinson, Danvers, for Eaton grapes.

1.50. Gratuity to W. P. Hutchinson, Danvers, for Florence grapes.

1.00. Gratuity to W. P. Hutchinson, Danvers, for Hayes grapes.

1.00. Gratuity to G. D. Walton, Peabody, for Clinton grapes.

1.00. Gratuity to S. J. Baker, Methuen, for Moore's Early grapes.

1.50. Gratuity to S. J. Baker, Methuen, for Lady grapes.

1.00. Gratuity to S. J. Baker, Methuen, for Niagara grapes.

1.00. Gratuity to S. J. Baker, Methuen, for Pocklington grapes.

1.00. Gratuity to Mrs. J. A. Sochrens, Andover, for Champion quinces.

1.00. Gratuity to Elizabeth Foley, Lawrence, for Lemon quinces.

1.50. Gratuity to J. F. Gulliver, Andover, for Orange quinces.

1.00. Gratuity to E. L. Saunders, Lawrence, for Orange quinces.

J. W. Goodell, Aaron Sawyer, Albert Emerson—*Committee.*

PLANTS.

The Committee on Plants have attended to their duty and respectfully report to the Secretary that they have made the following awards:

$10. First premium to J. B. Hally, Lawrence, for Collection of Plants.

5.00. Second premium to Edward Flynn, Lawrence, for Collection of Plants.

50c. Gratuity to Mrs. J. W. Porter, Lawrence, for Cactus.

50c. Gratuity to Mrs. Benj. Griffin, Lawrence, for Night Blooming Cerius.

T. C. Thurlow, Bertha Chandler, Mrs. Chas. Perley.—*Committee.*

FLOWERS.

The Committee on Flowers have attended to their duty and respectfully report to the Secretary that they have made the following awards:

2.00. First premium, to Benj. F. Bickum, Haverhill, for two Bouquets.

1.00. First premium, to Mrs. Geo. E. Kline, Lawrence, for Marigolds.

5.00. First premium to Mrs. Julia A. Cain, Lynn, for Collection 100 varieties.

1.00. First premium, to Mrs. Julia A. Cain, Lynn, for Geraniums.

1.00. First premium, to Mrs. Julia A. Cain, Lynn, for Geraniums.

2.00. First premium, to Mrs. Julia A. Cain, Lynn, for Bouquet.

1.00. First premium, to Abbie L. Cain, Lynn, for Salpiglossis.

1.00. First premium, to S. P. Buxton, Peabody, for Carnations.

1.00. First premium, to S. P. Buxton, Peabody, for Garden Annuals.

1.00. First premium, to S. P. Buxton, Peabody, for Scabiosas.

1.00. First premium, to Mrs. Oscar Young, No. Andover, for Double Phlox.

1.00. First premium, to Mrs. Oscar Young, No. Andover, for Zinnias.

1.00. First premium, to Mrs. George Burnham, No. Andover, for Nasturtiums.

1.00. First premium, to S. P. Buxton, Peabody, for Pansies.

1.00. First premium, to Mrs. N. M. Powers, Lawrence, for Coxcombs.

2.00. First premium, to E. H. Gage, Methuen, for basket of flowers.

2.00. First premium, to Mrs. G. L. Averill, No. Andover, for Pansies.

1.00. First premium, to Mrs. G. L. Averill, No. Andover, for Dianthus.

1.00. First premium, to Mrs. G. L. Averill, No. Andover, for Marigolds.

2.00. First premium, to T. C. Thurlow, West Newbury, for Phlox.

1.00. First premium, to Carrie Fuller, No. Andover, for Petunias.

3.00. First premium, to Bertha L. Jenkins, Lawrence, for Design.

5.00. First premium, to Helen M. Jenkins, Lawrence, for Cut flowers, 100 varieties.

1.00. First premium, to Mrs. Edwin Haseltine, Haverhill, for Sweet Peas.

5.00. First premium, to Charles E. Wingate, Lawrence, for Design of flowers.

5.00. First premium, to J. B. Halley, Lawrence, for Floral design.

1.00. Second premium, to Arthur Crosby, Methuen, for Sweet Peas.

3.00. Second premium, to Mrs. Rose Buxton, Peabody, for collection of flowers.

1.00. Second premium, to Mrs. Oscar Young, No. Andover, for Basket of flowers.

1.00. Second premium, to Annie C. Horch, Rowley, for Bouquet.

2.00. Second premium, to T. C. Thurlow, West Newbury, for Japan Lillies.

1.00. Second premium, to Mrs. Edwin Haseltine, Haverhill, for Bouquet.

50c. Gratuity, to Mrs. N. M. Powers, Lawrence, for Coxcombs.

1.00. Gratuity, to Thomas Milner, No. Andover, for Coxcombs.

50c. Gratuity, to E. M. Eames, Andover, for Zinnias.

1.00. Gratuity, to Mrs. Geo. L. Gage, Lawrence, for Pinks.

50c. Gratuity to Arthur Crosby, Methuen, for Pansies.

50c. Gratuity, to Abbie L. Cain, Lynn, for Garden Annuals.

50c. Gratuity, to Abbie L. Cain, Lynn, for Calendulas.

50c. Gratuity, to Abbie L. Cain, Lynn, for Marigolds.

50c. Gratuity, to S. P. Buxton, Peabody, for Bouquet.

50c. Gratuity, to S. P. Buxton, Peabody, for Dahlias.

75c. Gratuity, to S. P. Buxton, Peabody, for Geraniums.

50c. Gratuity, to S. P. Buxton, Peabody, for Verbenas.

50c. Gratuity, to S. P. Buxton, Peabody, for Garden Annuals.

50c. Gratuity, to S. P. Buxton, Peabody, for Dianthus.
50c. Gratuity, to R. P. Struthus, Lynn, for Bouquet.
50c. Gratuity, to Mrs. Oscar Young, No. Andover, for Nasturtiums.
50c. Gratuity, to J. J. H. Gregory & Son, Marblehead, for Zinnias.
75c. Gratuity, to Mrs. J. H. Hill, Amesbury, for Calendulas.
50c. Gratuity, to Mrs. J. H. Hill, Amesbury, for Dahlias.
1.00. Gratuity, to Mrs. J. H. Hill, Amesbury, for Dahlias.
75c. Gratuity, to Mrs. Geo. L. Averill, No. Andover, for Garden Annuals.
50c. Gratuity, to Mrs. Geo. L. Averill, No. Andover, for Phlox.
75c. Gratuity, to Bertha Chandler, Andover, for Marigolds.
50c. Gratuity, to Mrs. Edwin Haseltine, Haverhill, for Pansies.
50c. Gratuity, to Mrs. Edwin Haseltine, Haverhill, for Garden Flowers.
50. Gratuity, to Mrs. Edwin Haseltine, Haverhill, for Pansies.
1.00. Gratuity, to Mrs. S. J. Baker, Methuen, for Tubrous Begonias.
75c. Gratuity, to Mrs. John Griffin, Lawrence, for Dahlias.
50c. Gratuity, to Mrs. S. F. Dearborn, Methuen, for Asters.
50c. Gratuity, to Mrs. S. F. Dearborn, Methuen, for Heliotrope.
50c. Gratuity, to M. Wingate & Son, Lawrence, for Roses.
50c. Gratuity, to E. F. Childs, Lawrence, for Native Flowers.
50c. Gratuity, to Edward Flynn, Lawrence, for Floral Exhibit.
50c. Gratuity, to Edward Flynn, Lawrence, for Roses.

J. D. Kingsbury, Mrs. David Warren, Charlotte N. S. Horner, Nellie E. Moore—*Committee.*

VEGETABLES.

The Committee on Vegetables have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$5.00. First premium, to Cochickewick Farm, No. Andover, for collection of vegetables.

3.00. First premium, to G. S. Phippen, Methuen, for Marrow squash.

3.00. First premium, to G. S. Phippen, Methuen, for Turban squash.

3.00. First premium, to G. S. Phippen, Methuen, for Hubbard squash.

3.00. First premium, to G. S. Phippen, Methuen, for Early Rose potatoes.

3.00. First premium, to John R. Shirley, Methuen, for Bay State Squash.

3.00. First premium, to Geo. L. Burnham, No. Andover, for Fotler's cabbage.

3.00. First premium, to S. H. Bailey, Andover, for Red cabbage.

3.00. First premium, to Richard Jaques, Newbury, for Savoy cabbage.

3.00. First premium, to Richard Jaques, Newbury, for Salmon Flesh melon.

3.00 First premium, to Geo. W. Chadwick, Boxford, for Pearl of Savoy potatoes.

3.00. First premium, to Walter Chadwick, Boxford, for Yellow Danvers onion.

3.00. First premium, to Edwin Bates, Lynn, for deep head cabbage.

3.00. First premium, to Edwin Bates, Lynn, for all season's cabbage.

3.00. First premium, to Edwin Bates, Lynn, for Red onions.

3.00. First premium, to Edwin Bates, Lynn, for Livingston's tomatoes.

3.00. First premium, to Edwin Bates, Lynn, for Acme tomatoes.

3.00. First premium, to C. R. Anderson, Boxford, for Stone Mason cabbage.

3.00. First premium, to John A. Shirley, Methuen, for Sibley squash.

3.00. First premium, to J. L. Nudd, Lawrence, for Peach tomatoes.

3.00. First premium, to A. P. Russell, Lawrence, for Beauty of Hebron potatoes.

3.00. First premium, to J. J. H. Gregory, Marblehead, for Yellow Flat onions.

3.00. First premium, to J. J. H. Gregory, Marblehead, for collection of vegetables.

3.00. First premium, to J. J. H. Gregory, Marblehead, for greatest variety of Tomatoes.

3.00. First premium, to S. H. Bailey, Andover, for Houlton Rose Potatoes.

2.00. First premium, to W. K. Cole, Boxford, for Cauliflower.

2.00. First premium, to Virgil Dow, Methuen, for Watermelons.

2.00. First premium, to C. H. Hall, Methuen, for Celery.

3.00. First premium to J. W. Henderson, Andover, for Cauliflowers.

3.00. First premium, to Chas. B. Carlton, Boxford, for Early Maine Potatoes.

2.00. Second premium, to Cochickewick Farm, No. Andover, for Stone Mason Cabbage.

2.00. Second premium, to Cochickewick Farm, No. Andover, for All Seasons Cabbage.

1.00. Gratuity, to Cochickewick Farm, No. Andover, for Citron Melon.

1.00. Gratuity, to John Harrington, Methuen, for Clark's No. 1 Potatoes.

1.00. Gratuity, to A. P. Fuller, No. Andover, for Clark's No. 1 Potatoes.

1.00. Gratuity, to Richard Jacques, Newbury, for Marrow Squash.
1.00. Gratuity, to Richard Jacques, Newbury, for Turban Squash.
1.00. Gratuity, to H. N. Chubb, Lawrence, for Stone Mason Cabbage.
1.00. Gratuity, to S. F. Newman, Newbury, for Stone Mason Cabbage.
1.00. Gratuity, to N. R. Bailey, Andover, for Savoy Cabbage.
1.00. Gratuity, to E. L. Saunders, Lawrence, for Tomatoes.
1.00. Gratuity, to A. P. Russell, Methuen, for Watermelons.
1.00. Gratuity, to A. P. Russell, Methuen, for Turban Squash.
1.00. Gratuity, to F. A. Russell, Methuen, for Red Cabbage.
1.00. Gratuity, to F. A. Russell, Methuen, for Savoy Cabbage.
1.00. Gratuity, to F. A. Russell, Methuen, for Stone Mason Cabbage.
1.00. Gratuity, to G. L. Averill, No. Andover, for Early Rose Potatoes.
1.00. Gratuity, to W. K. Cole, Boxford, for Marrow Squash.
1.00. Gratuity, to J. C. Poor, No. Andover, for Savoy Cabbage.
1.00. Gratuity, to Homer Dow, Methuen, for Onions.
1.00. Gratuity, to Cochickewick Farm, No. Andover, for Early Maine Potatoes.
1.00. Gratuity, to Cochickewick Farm, No. Andover, for Crookneck Squash.
1.00. Gratuity, to Cochickewick Farm, No. Andover, for Essex Hybrid Squash.
1.00. Gratuity, to Cochickewick Farm, No. Andover, for Citron Melons.

William P. Bailey, J. A. Lamson, John F. Chesley, G. S. Phippen, Nathaniel Marble.—*Committee.*

VEGETABLES—CLASS TWO.

The Committee on Vegetables, second class, have attended to their duty and respectfully report to the Secretary that they have made the following awards:

$3.00. First premium, to W. K. Cole, Boxford, for Stowell's Evergreen Corn.

3.00. First premium, to W. K. Cole, Boxford, for Cory Sweet Corn.

3.00. First premium, to W. Burke Little, Newbury, for Eclipse Beets.

3.00. First premium, to W. Burke Little, Newbury, for Edmands Beets.

3.00. First premium, to W. Burke Little, Newbury, for Short Horn Carrot.

3.00. First premium, to John W. Shirley, Methuen, for Danvers Intermediate Carrot.

3.00. First premium, to W. Burke Little, Newbury, for Long Orange Carrot.

3.00. First premium, to R. Jacques, Newbury, for Mangold Wurtzels.

3.00. First premium, to H. A. Stiles, Middleton, for Purple top Turnips.

3.00. First premium, to H. A. Stiles, Middleton, for White Flat Turnips.

3.00. First premium, to R. Jacques, Newbury, for Yellow Ruta Baga Turnips.

3.00. First premium, to Geo. L. Averill, No. Andover, for White Ruta Baga Turnips.

3.00. First premium, to R. Jacques, Newbury, for Parsnips.

3 00. First premium, to W. K. Cole, Boxford, for Cranberries.

2.00. Second premium, to Andrew Lane, Rockport, for Cranberries.

1.00. Third premium, to H. M. Killam, Boxford, for Cranberries.

1.00. Gratuity to E. G. Hardy, Andover, for Stowell's Evergreen Corn.

1.00. Gratuity, to Geo. L. Averill, No. Andover, for Early Essex Sweet Corn.

1.00. Gratuity to N. R. Bailey, Andover, for White Egg Turnips.

1.00. Gratuity to W. Burke Little, Newbury, for Parsnips.

1.00. Gratuity to Geo. L. Averill, No. Andover, for White Egg Turnips.

1.00. Gratuity to W. J. Clark, Andover, for Yellow Ruta Baga Turnips.

1.00. Gratuity to C. L. Bailey, Andover, for Purple top Turnips.

1.00. Gratuity to Edwin Bates, Lynn, for Mangold Wurtzels.

1.00. Gratuity to W. H. Hayes, No. Andover, for Intermediate Danvers Carrot.

Warren M. Cole, William Hilton, Wilbur J. Munroe, W. F. Vining. — *Committee.*

GRAIN AND SEED.

The Committee on Grain and Seed have attended to their duty and respectfully report to the Secretary, that they have made the following awards:

$1.00. First premium to H. M. Killam, Boxford, for Shelled Corn.

1.00. First premium to B. W. Farnham, No. Andover, for Field Beans.

5.00. First premium to A. L. Longfellow, Groveland, for 25 ears Field Corn.

3.00. First premium to Edwin Bates, Lynn, for 25 ears Pop Corn.

8.00. First premium to J. J. H. Gregory & Son, Marblehead, for Collection of Seeds.

3.00. Second premium to C. K. Ordway, West Newbury, for 25 ears Field Corn.

2.00. Second premium to Virgil Dow, Methuen, for 25 ears Pop Corn.

2.00. Third premium to Geo. A. Rogers, No. Andover, for 25 ears Field Corn.

Fred H. Bates, Thaddeus Hale, Joseph N. Rolf.—*Committee.*

COUNTERPANES AND AFGHANS.

The Committee on Counterpanes and Afghans have attended to their duty and respectfully report to the Secretary that they have made the following awards:

$4.00. First premium, to Mrs. W. H. Sumner, Newburyport, for Crochet quilt.

2.00. Second premium, to Nellie M. Standley, Newburyport, for Satin quilt.

2.00. Gratuity to Mrs. Anna Thompson, Lawrence, for Calico quilt.

1.00. Gratuity, to S. Smith, Lawrence, for Outline quilt.

1.00. Gratuity, to Bertha Lawrence, Lawrence, for Silk quilt.

1.00. Gratuity, to Mrs. N. Stanley, Newburyport, for Satin quilt.

.50. Gratuity, to E. M. Stanley, Newburyport, for Cotton quilt.

.50. Gratuity, to J. Smith, Newburyport, for Crazy quilt.

1.50. Gratuity, to Mrs. J. Brookings, Newburyport, Crazy quilt.

2.00. Gratuity, to Mrs. G. E. Reed, Lawrence, for Crocheted quilt.

1.50. Gratuity, to Mrs. M. J. Bemis, Lawrence, for Afghan.

1.00. Gratuity, to Mrs. Emerson Robbins, Lawrence, for Crazy quilt.

.75. Gratuity, to Minnie Dowd, Methuen, for Crocheted Afghan.

1.00. Gratuity, to Jennie M. Wilson, Lawrence, for Crocheted quilt.

.50. Gratuity, to Augusta J. Bain, Lynn, for Patchwork quilt.

.50. Gratuity, to Mrs. John Brierly, No. Andover, for Calico quilt.

1.00. Gratuity, to Mrs. Walter Sargent, Methuen, for Knit quilt.

1.00. Gratuity, to Lucy Chubbs, Lawrence, for Kensington quilt.

1.00. Gratuity, to Helen Carruth, Andover, for Satin quilt.

1.00. Gratuity, to Fannie Lee, Lawrence, for Crocheted Afghan.

Mrs. H. F. Longfellow, Lottie Swan, Sarah P. Blunt—*Committee.*

REPORT OF COMMITTEE ON COUNTERPANES AND AFGHANS.

Counterpanes and Afghans! How suggestive of practicality and comfort! At the close of the daily toil and duties as one "wraps the drapery of his couch about him," how the pleasant dreams are enhanced by the beauty and warmth of his coverings! Whether king, peasant, soldier or peaceful citizen the necessity for these protective coverings is recognized. Whether the coarse blanket of earth's lowly or silken magnificence of royalty, were not their dreams the sweeter, or the treacherous, evil designs conjured in bad brains modified? We sincerely hope them less sanguinary. And what a multiplicity of material has been brought into requisition! The cochineal sacrificed

its tiny life for its scarlet dye—the roots, barks, lichens give beautiful coloring, and "in our grandmother's days" were utilized. Erect, thrifty dames of the colonial period cut, with mathematical precision, their "squares" of patchwork with which they fashioned their marvelous quilts of intricate "Log Cabin" or "White House Steps," staid little maidens who, despite finger pricks and tear-bedewed faces have, at last, pieced a quilt, and with *what* contempt was regarded the "ne'er do weel" who had no ambitions. Looms have produced the richest stuffs, needles clicked, needles creaked with the stitchery brought upon them. And has not the faculty of these ancient grandmothers descended upon the women of to-day? We trust so, and to the products of our Essex County add greatly. Those who witnessed the display at the Agricultural Fair, where there was a large collection hung around the hall, like so many flaunting, royal banners, would say it was not a "lost art." Counterpanes of the dear beloved patchwork were there, the "crazy quilt," the evolution of the older album quilt, irregular bits of silk, satin, velvet, joined by ornamental stitches, hand-painted, lace adorned—what more kaleidoscopic in coloring! Afghans crocheted in brilliant wools or modest soft shades, how could it be an easy task for the committee to select those pre-eminently beautiful? One of scarlet satin and ecru pongee silk was so artistic in its simple harmony of tints that it was awarded the first premium, while the second was secured by the maker of one of Glasgow linen thread of yellowish tint; some sixty spools were required in its crocheting. The evenness of the work, the beauty of the pattern made it incredibly pretty. Still another, displayed over a lining of pink was very lace-like in effect, and received much praise. Seeing so much to approve, the committee had expended the sum allowed for premiums and gratuities, very disconsolately had to retrace steps and pass by many a deserving quilt. Those whose work was unrecognized by a conspicuous card may rest assured that it was not

unappreciated. Each possessed its merit — for ingenuity, for tasteful assortment of colors or nice needlework. And what an interesting study of historical periods— of changed conditions. All honor to the patchwork quilt, not to be superseded by these fanciful groupings of the present. Still may busy fingers sew, crochet, knit, or the sewing machine lend its aid in putting into form and shape these comfortable adjuncts to our sleeping hours, and the outer covering for our healthful drives, and then may they be brought to the County Fair to receive their meed of praise.

MRS. HORACE F. LONGFELLOW,
Chairman of Committee.

CARPETINGS AND RUGS.

The Committee on Carpetings and Rugs have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$3. First premium, to Mrs. J. W. Poor, Andover, for Drawn rug.

$2. Second premium, to Mrs. T. O. Connor, Lawrence, for Knit curled rug.

$1.50 Gratuity, to Mrs. A. R. Sanborn, Lawrence, for Silk rug.

$1.50 Gratuity, to Mabel P. Allison, Lawrence, for Silk rug.

$1.50 Gratuity, to Mrs. M. E. Cook, Newburyport, for Braided rug.

$1. Gratuity, to Mrs. C. R. Marshall, Newburyport, for Braided rug.

$1. Gratuity, to Mrs. W. F. Richardson, Lawrence, for Drawn rug.

$1. Gratuity, to Mrs. Mary Lewis, Lawrence, for Braided rug.

$1. Gratuity, to Mrs. G. L. Huntoon, Lawrence, for Curled knit rug.

$1. Gratuity, to Mrs. J. W. Frederick, Methuen, for Silk rug.

$1. Gratuity, to Mrs. Eliza W. Stokes, Lawrence, for Silk rug.

$1. Gratuity, to Mrs. H. E. Mead, No. Andover, for Drawn rug.

$1. Gratuity, to Mrs. George Smith, Lawrence, for Drawn rug.

75c. Gratuity, to Mrs. J. Anderson, Andover, for Drawn rug.

75c. Gratuity, to Miss Dora Ellis, No. Andover, for Shaker mat.

50c. Gratuity, to Mrs. J. Emerson, Methuen, for Knit rug.

50c. Gratuity, to Mrs. J. H. Greenleaf, Lawrence, for Drawn rug.

50c. Gratuity, to Mrs. C. S. Eaton, Methuen, for Braided rug.

50c. Gratuity, to Mrs. J. B. Brookings, Newburyport, for Knit curled rug.

Mrs. W. C. Allyn, Mrs. J. O. Parker, Mrs. Wm. M. Rogers, Mrs. Oscar Young—*Committee.*

ARTICLES MANUFACTURED FROM LEATHER.

The Committee on Articles Manufactured from Leather have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

$5. First premium, to McDonald & Hannaford, No. Andover, for Express harness.

$5. First premium to P. Carrow, Lawrence, for Carriage harness.

$2. First premium, to M. B. Bailey, Topsfield, for Children's hand made shoes.

$2. First premium, to M. B. Bailey, Topsfield, for Children's machine made shoes.

$5. Gratuity, to P. Carrow, Lawrence, for Exhibit of Leather Goods.

Amos Haseltine—*for the Committee.*

FANCY WORK.

The Committee on Fancy Work have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$1. Gratuity, to Mrs. W. M. Gile, Lawrence, for table covers.

$1. Gratuity, to Mrs. A. M. Fowler, Lawrence, for apron and lace edging.

$1. Gratuity, to E. H. Gage, Methuen, for silk scarf and tray cloth.

$1. Gratuity, to Mrs. William Heald, Lawrence, for wool shawl.

$1. Gratuity, to Mrs. Alvah Locke, Lawrence, for handkerchief.

$1. Gratuity, to Mrs. M. H. Pulsifer, No. Andover, for tidy and doilies.

$1. Gratuity, to Mrs W. H. Sumner, Newburyport, for English point lace.

$1. Gratuity, to Helen B. Gile, Lawrence, for table, centres and doilies.

$1. Gratuity, Mrs. N. L. Sumner, Newburyport, for Mexican work and dress.

$1. Gratuity, to Mrs. Wilmot A. Reed, Gloucester, for tidies, Mexican work.

$1. Gratuity, to Mrs. Walter L. Rowe, Gloucester, for table cover and tidy.

$1. Gratuity, to Mrs. H. O. Rowell, Newburyport, for bureau scarf.

$1. Gratuity, to Miss Lizzie G. Wilson, Lawrence, for pillow shams.

$1. Gratuity, to Mrs. J. C. White, Lawrence, for handkerchief.

$1. Gratuity, to Mrs. Mary Wall, Methuen, for dresses, lace work.

$1. Gratuity, to Helen Chamberlain, Lawrence, for centre piece and doilies.

$1. Gratuity, to Selma M. Rother, Lawrence, for tray cloth and handkerchief.

$1. Gratuity, to Mrs. Milton Currier, Lawrence, for table covers and centre piece.

$1. Gratuity, to Laura F. Farnham, No. Andover, for pillow shams.

$1. Gratuity, to Annie B. Shattuck, Lawrence, for point lace handkerchief.

$1. Gratuity, to Mrs. C. F. Whittredge, Lawrence, for tray cloth and doilies.

50c. Gratuity, to Sarah C. Laney, Methuen, for two sets table mats.

75c. Gratuity, to Mrs. J. W. Turple, Newburyport, for tray cloths, etc.

50c. Gratuity, to M. E. Johnson, Methuen, for crochet shawl.

75c. Gratuity, to Miss Sheeler, Lawrence, for sofa pillow.

75c. Gratuity, to Lizzie Clarke, Newburyport, for table cover and lace work.

75c. Gratuity, to Annie Brookings, Newburyport, for dresses.

50c. Gratuity, to Mary C. Wethern, Newburyport, for point lace handkerchief.

75c. Gratuity, to Nellie M. Stanley, Newburyport, for cut work doilies.

50c. Gratuity, to Louise M. Mathews, Lawrence, for doilies.

75c. Gratuity, to Laura Haigh, Lawrence, for crochet dress.

75c. Gratuity, to Mary L. Lane, Lawrence, for apron.

75c. Gratuity, to Miss Tenney, Newburyport, for table doilies.

50c. Gratuity, to Mrs. J. S. Ricker, Lawrence, for flannel skirt.

50c. Gratuity, to Mrs. Robert Lindsay, Lawrence, for pillow slips.

50c. Gratuity, to Mrs. John E. Davis, Methuen, for crochet trimming.

75c. Gratuity, to Mrs. E. A. Lawrence, Lawrence, for Mexican work.

50c. Gratuity, to Mrs. V. J. Knot, Lawrence, for center piece and handkerchief.

75c. Gratuity, to Mrs. Geo. Huntoon, Lawrence, for fire screen, &c.

50c. Gratuity, to Maggie Blair, Lawrence, for apron.

75c. Gratuity, to Mrs. Isaac Wilson, Lawrence, for apron.

50c. Gratuity, to Miss M. H. Pulsifer, No. Andover, for apron and skirt.

75c. Gratuity, to Nora Rowe, Lawrence, for night robes.

75c. Gratuity, to Mrs. F. S. C. Herrick, Lawrence, for towels and table covers.

75c. Gratuity, to Mrs. J. C. Fisher, Lawrence, for tray cloth.

75c. Gratuity, to Alice Sherman, Lawrence, for table and tray cloths.

75c. Gratuity, to Kate A. Swift, Andover, for butter cloth.

75c. Gratuity, to Mrs. L. Vooholg, Lawrence, for apron.

50c. Gratuity, to Henrietta McCarty, Lawrence, for lace apron.

50c. Gratuity, to Gertie O'Connel, Lawrence, for tidy, lamp shade.

75c. Gratuity, to Grace A. Talbot, Lawrence, for tidy and apron.

75c. Gratuity, to Annie Creaser, Lawrence, for apron.

50c. Gratuity, to Edith Creaser, Lawrence, for handkerchief.

50c. Gratuity, to M. L. Philbrick, Lawrence, for edging.

50c. Gratuity, to Mrs. Edward R. Noon, Lawrence, for tatting tidy.

Annie K. Day, Anna A. B. Childs, Mary A. Leach—*Committee.*

WORKS OF ART.

The Committee on Works of Art have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$3.00. Gratuity, to Gertrude Boardman, Lawrence, for water color painting.

3.00. Gratuity, to Mrs. L. H. Fitch, Lawrence, for water color painting.

3.00. Gratuity, to Miss Woodford, Lawrence, for china painting.

3.00. Gratuity, to Serena Lane, Lawrence, for oil color.

2.00. Gratuity, to the Sunday Telegram, Lawrence, for photogrames.

1.50. Gratuity, to Mrs. Carrie Whittredge, Lawrence, for china painting.

1.50. Gratuity, to Mrs. Sanborn, Lawrence, for china painting.

1.50. Gratuity, to Miss C. Swan, Methuen, for china painting.

1.50. Gratuity, to Mrs. E. Bicknell, Lawrence, for china painting.

1.00. Gratuity, to Mrs. Winslow, Lawrence, for china painting.

1.00. Gratuity, to Miss L. Lamprey, Lawrence, for china painting.

1.00. Gratuity, to Mrs. James Joyce, Lawrence, for china painting.

1.00. Gratuity, to Hattie Stowell, Lawrence, for china painting.

1.00. Gratuity, to O. A. Kenefick, Lawrence, for portraits.

1.00. Gratuity, to Enterprise Photograph Co., Lawrence, for photographs.

1.00. Gratuity, to Mary Lee, Lawrence, for water color.

1.00. Gratuity, to Mr. Cooper, Lawrence, for water co lor.
1.00. Gratuity, to Mary McCabe, Lawrence, for oil painting.
1.00. Gratuity, to Mary Williams, No. Andover, for oil painting.
1.00. Gratuity, to Louise Mathews, Lawrence, for water color.
1.00. Gratuity, to Annie Haley, Lawrence, for crayon.
1.00. Gratuity, to Nellie Magoon, Lawrence, for oil painting.
1.00. Gratuity, to Charlotte Swan, Lawrence, for oil painting.
1.00. Gratuity, to M. A. Summers, Lawrence, for oil painting.
1.00. Gratuity, to Mrs. John Porter, Lawrence, for oil painting.
1.00. Gratuity, to Marion Jenkins, Lawrence, for oil painting.
1.00. Gratuity, to A. Greeley, Lawrence, for oil color.
75c. Gratuity, to Mary Swett, Lawrence, for china painting.
75c. Gratuity, to Ella Scott, Lawrence, for china painting.
75c. Gratuity, to Mrs. Dane Scott, Lawrence, for china painting.
75c. Gratuity, to Kate Clarke, Lawrence, for china painting.
75c. Gratuity, to Mary Bean, Lawrence, for china painting.
75c. Gratuity, to Bessie Swan, Methuen, for china painting.
75c. Gratuity to Mrs. Bruce, Lawrence, for china painting.
75c. Gratuity, to Mrs. Wainwright, Lawrence, for china painting.
75c. Gratuity, to Miss Hodgdon, Methuen, for china painting.
75c. Gratuity, to Miss Fremmer, Lawrence, for china painting.
75c. Gratuity, to Miss Bradley, Lawrence, for china painting.

75c. Gratuity, to Miss Conlon, Lawrence, for china painting.

50c. Gratuity, to Miss Shepherd, Lawrence, for china painting.

50c. Gratuity, to Mrs. G. H. Hadley, Lawrence, for china painting.

50c. Gratuity, to Mrs. Holt, Lawrence, for china painting.

50c. Gratuity, to Marion C. Howard, Lawrence, for china painting.

50c. Gratuity, to Miss G. M. Copp, Lawrence, for oil painting.

50c. Gratuity, to W. E. Spear, Lawrence, for crayon painting.

Mrs. F. E. Clarke, S. P. Boynton, Mrs. Nellie Winchester, Virginia Stevens—*Committee.*

CHILDREN'S WORK.

The Committee on Children's Work have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$3.00. First premium, to Ethel Churchill, Lawrence, for work on towels.

2.00. Second premium, to Lizzie Little, Haverhill, for mat.

50c. Gratuity, to Hattie Rea, No. Andover, for apron and needlework.

50c. Gratuity, to Arthur Packard, Lawrence, for table cover.

50c. Gratuity, to Katherine Herrick, Lawrence, for skirt.

50c. Gratuity, to Isabelle St.C. Herrick, Lawrence, for skirt.

50c. Gratuity, to Sadie Taylor, Lawrence, for needlework.

50c. Gratuity, to Alice E. Chase, Methuen, for comfortable.

50c. Gratuity to Lottie Griffin, Lawrence, for apron.

50c. Gratuity, to Grace McAllister, Lawrence, for tray cloth.

There were several articles of merit that would have received special notice, but the ages of the children were above the required age of twelve years.

The committee recommend that the age be changed from twelve to fourteen years.

Alice U. Russell, Mrs. L. S. Currier, Mrs. G. L. Burnham, Mrs. Bennet Griffin—*Committee.*

MANUFACTURES AND GENERAL MERCHANDISE.

The Committee on Manufactures and General Merchandise have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

Diploma, to George E. Marsh, Lynn, for Good Will Soap.

Diploma, to the Lawrence Gas Co., Lawrence, for stoves.

Diploma, to M. E. Austin, Lawrence, for display of Hardware.

Diploma, to the Beach Soap Co., Lawrence, for display of soap.

Diploma, to the Briggs & Allyn Manufacturing Co., Lawrence, for display of mantels and woodwork.

Diploma, to Brown & Acroyd, Lawrence, for dress goods.

Diploma, to Byron Truell, Lawrence, for dress goods.

Diploma, to the People's Furnishing Store for Gent's Furnishings.

Diploma, to Mrs. D. A. Mathews for system of dress cutting.

$5.00 Gratuity, to the Glen Mills, Rowley, for 16 varieties manuf'd cereals.

1.00 Gratuity, to P. Hoogerziel, Beverly, for metal goods.

1.00 Gratuity, to Carl A. Garris, for taxidermists' goods.

1.00 Gratuity, to H. C. Carrol, for electric plating work.

1.00 Gratuity, to Treat Hardware Co., Lawrence, for hardware.

2.00 Gratuity, to Sanborn & Robinson, Lawrence, for display of hardware.

1.00 Gratuity, to D. H. Flint, Danvers, for steam cooker.

1.00 Gratuity, to Scollay & Rich, Lawrence, for diamond metal polish.

50c. Gratuity, to Thos. Edge, Lawrence, for clocks.

50c. Gratuity, to Samuel Walch, Lawrence, for stuffed birds.

50c. Gratuity, to Edward Atherton, Lawrence, taxidermist.

75c. Gratuity, to Samuel Lake, Lawrence, taxidermist.

50c. Gratuity, to Anson L. Griffin, Lawrence, for snow owl.

50c. Gratuity, to the Page Catering Co., Lawrence, confectionery.

50c. Gratuity, to J. J. Hannagan, Lawrence, for peat moss.

50c. Gratuity, to Wm. Henderson, Lawrence, for stuffed loon.

John H. George, W. J. Dole, Mrs. Frances Fitts, E. B. Dale—*Committee.*

GRANGE EXHIBIT.

The Committee on the Grange Exhibit have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$40. First premium, to the Andover Grange for exhibit.

30. Second premium, to the No. Andover Grange for exhibit.

20. Third premium, to the West Boxford Grange for exhibit.

10. Fourth premium, to the Methuen Grange for exhibit.

Sherman Nelson, Doane Cogswell, Chas. H. Preston, S. F. Newman, Asa. F. Newhall—*Committee.*

REPORT OF COMMITTEE ON ROOT CROPS.

The Committee selected to examine the Root Crops entered for premium respectively submit the following report. We have received in all fifteen entries, viz.:

David Warren, Swampscott, onions. John H. George, Methuen, potatoes and onions. Otis L. Kent, Newburyport, onions. J. Henry Nason, West Boxford, potatoes. Chas. C. Blunt, Andover, cabbage, parsnips, carrots and turnips. Samuel H. Bailey, Andover, cabbage. Walter Smith, Methuen, cabbage. Chas. B. Carlton, West Boxford, potatoes. Daniel A. Carlton, Andover, cabbage. E. C. Little, Haverhill, mangolds and potatoes.

It is indeed an unfavorable season, when Essex County does not succeed in raising some extra large crops; we were agreeably surprised to find, in a season like the present, such large crops, especially onions and potatoes.

The Committee desire to thank each competitor, whom they had occasion to visit, for the cordial manner in which they were received and for the knowledge obtained in their special branch of farming. It is impossible for an observing person to thus visit these representative farmers, without gaining valuable information in nearly every department of this most complicated, but noblest occupation of man.

Although the duties of this Committee are as a rule, somewhat arduous, occupying considerable time, we feel that we have been amply rewarded for our services, by the knowledge gained by thus meeting our fellow farmers.

Sept. 1, we commenced our duties by calling on Mr. David Warren, who many of the members of the society know as a specialist in growing and putting up superior seeds, such as cabbage, squash, carrot, sweet corn, etc. He occupies the Hooper farm in Swampscott, where that

famous cabbage, the Stone Mason, was originated by John Mason, who later in life, purchased and passed the remainder of his days on one of the best farms in Amesbury, which is situated on the borders of the lake made ever celebrated by Whittier's poem, Maids of Attitash.

"In sky and wave the white clouds swam,
And the blue hills of Nottingham
Through gaps of leafy green
Across the lake were seen."

Mr. Warren's onion crop was at the time of our visit completely dried down, of good size, very thick and of extra fine quality.

We are sorry to report that Mr. Warren decided not to put in his statement. In this connection the Committee wish to call the attention of the trustees to the rule,—"In ascertaining the amount of crop, any vessel may be used and the weight of its contents once, multiplied by the number of times it is filled by the crop." There are some crops in this department, such as carrots, parsnips, and especially, cabbage, that it is impracticable to get at the amount of the crop in this way; these crops are not generally harvested at the time when the statements are called for (Nov. 1st.), thus we did not attempt to hold these crops to the rule. We believe there should be some definite method to guide the Committee in the future, in like cases. In regard to onions, it is the practice of many who wish to keep them for winter marketing, to store them with the tops on, so it is quite a task to correctly compute the crop according to this rule—this, as we understand, was the cause of Mr. Warren's failure to put in his statement.

On returning from Mr. Warren's we saw Mr. Kent's field of onions at Newburyport, most of which were of good quality, the right size, but not quite as ripe at that time as the average crops this season. In order to make an half acre (the required area) he had to put in some twenty rods of new land which materially reduces his yield. It was quite evident that on Sept. 3, we undertook to accomplish too much work and to go over too much ter-

ritory. Not being able to be on time to meet our last engagement, we had the pleasure of a walk of about four miles around the lake from No. Andover to West Boxford; we certainly realized that Andover is a large town.

In the morning we were met at Methuen, by Mr. George. His onions and potatoes were grown on the rich meadow land, which all who have read his statements during the last few years in the transactions of this society, are familiar with. The variety he raised this season was the Southport Yellow Globe, which were well ripened, of fine size and no picklers, but in our judgment not quite up in quality to the Danvers Yellow.

Mr. George called our attention to the ravages of the maggot. In a former statement he spoke of an experiment with gas-lime, which that season seemed to be a sure preventative, but this year the maggot worked worse where the most lime was applied.

It has been the experience of the writer that land ploughed in the Fall and only harrowed in the Spring, which leaves the ground more compact, will be nearly free from this pest, in other words, the maggot works most in soft soil.

Mr. George's potatoes were also on the meadow and were a good crop for this season.

On adjoining ground Walter Smith showed us his field of cabbage which he entered for the society's premium.

Leaving Methuen we next called on Mr. Blunt at Andover; arriving there at noon, we were kindly invited to dine, after which we proceeded to Mr. Blunt's fields to view his parsnips, carrots, cabbage and turnips; each crop gave evidence of good fertilizing and care, free from weeds and very thrifty—we judge that Mr. Blunt is as good a farmer as he is Superintendent of Fair grounds.

We also looked at a piece of cabbage entered by Samuel H. Bailey who lived near. All the cabbage crops which we saw were looking well—but it was early in the season to form any opinion as to the amount of the crop.

J. Henry Nason of West Boxford has one of the few ex-

tra pieces of potatoes this season—large, smooth, with scarcely any not marketable.

Sept. 15, we were at Crystal Lake Farm, Haverhill, which is owned by Mr. Marsh; the crops, potatoes and mangolds were entered by his energetic foreman, Mr. E. C. Little. The drive from the city to the farm, across the highlands, through No. Broadway was much enjoyed. Arriving at the farm we found a splendid piece of potatoes for any year, a crop of over four hundred bushels per acre; here, even with this large crop we are again reminded of the importance of a frequent change of seed, Mr. Little calling our attention to the fact that on two rows planted with seed which was raised from that which was brought from the East in 1891, the yield was 22 bushels, while on the two next rows, planted with seed, procured from the East this Spring, 36 bushels were grown.

He has a fine crop of mangolds which we consider entitled to a premium.

Within a few years there has been a marked change in the method of growing potatoes. The writer well remembers the old time way which was a tedious one, the ploughing being done with a slow yoke of oxen, then harrowed with the same team with a square iron tooth-harrow, then opened with a hand hoe, now by the potato planter, or some other improved manner. Two seasons, I have used the Daniels furrower, which is a disc implement opening two rows at once, at equal distances and as straight as a pair of horses can be driven. The same machine covers in a fine manner, it also does the hilling better than any other implement, in fact it is the most satisfactory tool I have ever used. In raising my potatoes I did not touch a hand hoe, and they were more free from weeds than I could have possibly kept them by the old process.

Digging by hand which is at best a slow job, can be very much accelerated by the use of the horse machine, although most, including even such expert farmers as have raised the premium crops of the county, still cling to

the hand work in harvesting. To satisfy myself that there was a quicker and easier way to do that work I borrowed of a neighbor, a digger (manufactured by the same firm as the furrower), and used it on one-half acre. In fifteen minutes I dug twenty-two bushels.

It is true that it takes some longer to pick the potatoes, but its use is a great saving.

Another point is that the tubers are not cut or pricked as in hand work.

This tool works very much better where there are no weeds, and should its use become general it will have a tendency to better cultivation.

Charles B. Carlton entered a piece of potatoes; we saw Mr. Carlton on the day of the fair at Lawrence, and he decided not to have the Committee go to his place, saying that he should not put in a statement.

Our next and last visit was at Daniel A. Carlton's, his crop as usual was cabbage and a fine field it was.

If there is any evidence in the many premiums which he has obtained from the society for his cabbage crops, he certainly knows how to raise that vegetable.

The Committee having inspected all the crops which were entered, with the exception of Mr. Carlton's potato crop, at West Boxford (which was withdrawn), and after examining the statements of each crop, recommend the following awards, viz.

$10. First premium, to Kent & Marsh, Newburyport, for crop of onions.

$5. Second premium, to John H. George, Methuen, for crop of onions.

$10. First premium, to Crystal Lake Farm, Haverhill, J. J. Marsh, Proprieter, E. C. Little, Superintendent, for crop of potatoes.

$5. Second premium, to J. Henry Nason, West Boxford, for crop of potatoes.

$10. First premium, to Daniel A. Carlton, Andover, for crop of cabbage.

$5. Second premium, to Walter Smith, Methuen, for crop of cabbage.

$10. First premium, to Crystal Lake Farm, Haverhill, J. J. Marsh, Proprietor, E. C. Little, Superintendent, for crop of mangolds.

$10. First premium, to Chas. C. Blunt, Andover, for crop of English turnips.

$5. Second premium, to Chas. C. Blunt, Andover, for crop of carrots.

$10. First premium, to Chas. C. Blunt, Andover, for crop of parsnips.

B. F. Huntington, William S. Phillips, Jr., E. A. Emerson—*Committee.*

STATEMENT OF KENT & MARSH, ONION CROP.

I submit the following statement of crop of onions entered for premium. It contains eighty-one rods, is a sandy loam, and on high ground. Has been under cultivation six years, the last three in onions, except about twenty rods which is the first crop of onions, has been manured the same, with four cords of stable manure the past three years. Was manured and ploughed last fall and ploughed again in April. Was sown with 2 1-4 lbs. of Danvers Yellow Globe Onion seed, April 18th, was hoed five times and weeded four. The new part of the bed was badly eaten by cut worm and maggot, taking fully one half of crop. Harvested from the piece, four hundred and ten and three-fifths bush. (410 3-5). I measured five rods on the old bed and the result was thirty-six bush.

CROP.	*Dr.*
Ploughing and harrowing,	$5 00
Manure, 4 cords at $5.00,	20 00
Seed, 2 1-4 lbs. at $3.00,	6 75
Sowing,	1 00
Hoeing and weeding,	22 00
Harvesting,	3 00
Topping,	10 15
	72 90

Cr.

By 410 3-5 bush. of onions at 75c., $307 95

Balance, $235 05

My crop is not sold but I could sell today at prices above.

KENT & MARSH.

NEWBURYPORT, Sept. 2, 1892.

This is to certify that I have measured the onion land for Mr. Kent and find it to contain 87 rods and 26 yards.

Submitted by

C. W. NELSON.

REPORT OF A CROP OF ONIONS, RAISED AND ENTERED BY JOHN H. GEORGE OF METHUEN, 1892.

The crop last year was onions, manured with about 10 cords of manure per acre. The crop of 1890 was grass, this year it was manured part of it with night soil and gravel, part with horse and cow manure drawn from the barn cellar, part with a fertilizer composed of 1,000 lbs. dissolved from 300 muriate of potash and 200 lbs. nitrate of soda applied at the rate of 2,000 lbs. per acre, and on a small piece 2 feet of hen manure was put; the land was prepared in the usual way, the manure applied in the Fall, the fertilizer in the Spring, as was also the hen manure. The ground was ploughed, harrowed, brushed and dragged, and seed sown at the rate of 5 lbs. per acre, the kind used being the Southport Yellow Globe from Peter Henderson of New York City. The seed came up splendid and had the maggots let them alone I should have had an enormous crop; as it was eaten quite badly in spots, the crop was only a medium one, but the quality is first-class in every respect. I have entered it not so much because I thought I had a large crop, but as an interesting experiment with different kinds of manure. The crop where the hen manure was applied was poorest of the lot, that where night soil

was put was the best, the fertilizer next, and the manure last ; they were troubled with the maggots most where hen manure was used and the least where the fertilizer was used, and the night soil next and manure about the same, I applied 1-2 cord of gas lime on part of the piece to prevent the maggots work, but where there was the most lime put there was the most maggots. I have told a great many people that gas lime was a preventative, as my former use of it had given me a good reason to believe. I wish to take it all back and say that I don't know of anything that is of any use, as I have learned long ago that one swallow does not make a Summer and I have sometimes thought that there was not anything sure about farming any way, as what will produce a crop one year is sure to be a failure some other season. The piece which I enter contains one half an acre and the cost of the crop has been as follows:

Manure, fertilizer &c.,	$35 00
Ploughing, brushing and dragging,	3 00
Seed,	5 00
Sowing,	75
Hoeing 5 times,	4 00
Weeding 4 times,	12 00
Harvesting and marketing,	30 00
Interest and taxes on land,	6 00
	$95 75

The land was peat meadow. The crop was 332 bushels on one half acre and they are sold at $1.00 per bushel.

To Onion crop,	*Cr.*	$332 00
" " "	*Dr.*	95 75
		$237.75

Respectfully submitted,

JOHN H. GEORGE.

I hereby certify that I measured the land on which grew

the crop of onions entered by John H. George of Methuen, with the Essex Agricultural Society, and it measured 21,780 feet.

ISAAC H. LANEY.

METHUEN, MASS, Oct. 15th, 1892.

STATEMENT OF E. C. LITTLE, SUPT. CRYSTAL LAKE FARM.

The crop of mangels which I enter for premium were raised on yellow loam land, quite rocky. The crop of '91 was ensilage corn, the land being broken up in the spring and manure harrowed in. In the fall I spread on about six cords per acre of coarse stable manure drawn from the city, plowed it in. In the spring of '92, May 20, I gave the land a good harrowing, then used a brush harrow twice and picked off the rocks. I then put on Bradley's fertilizer with the corn planter, it being geared to use 400 pounds per acre, rows being three feet apart. I then sowed the seed with Sargent's machine, which sowed three lbs. of seed per acre, following the drills that I had previously made with corn planter. We weeded and thinned them out twice, and cultivated them eleven times.

Financial statement.	*Dr.*
To ploughing an acre of land,	$5 00
Harrowing one acre,	2 00
Marking and putting on Fertilizer,	1 50
400 lbs. of fertilizer,	8 40
3 lbs. of seed,	1 50
Weeding and thinning twice,	9 00
Cultivating,	5 50
Use of land,	6 00
Sowing the seed,	75
Six cords of manure,	30 00
Pulling and storing,	16 00
	$85 65

	Cr.	
By 740 bu. at 30 cts.	$257 00	
16 loads of tops,	16 00	
		$273 00

The tops I consider worth the above amount, as when I commenced to feed them out, the 16 cows were giving an average of eleven cans of milk per day, with some grain. I stopped giving grain and fed one cart load of tops per day. They have the same pasture feed as before and they gained after four days feeding up to fifteen cans. The last three days I fed them, they gave eighteen cans per day.

Yours respectfully,

E. C. Little.

P. S. I used Stockbridge potato manure on four rows right through the middle of the piece and after the first of August could see a difference in their favor and at the time of harvesting, the mangels were much larger.

This is to certify I measured a piece of land for E. C. Little, on which was raised a crop of mangels, entered for premium, and it contained 106 rods.

E. M. Emerson.

STATEMENT OF J. HENRY NASON, BOXFORD, POTATO CROP.

The crop on this land in 1890 was grass, about one ton to the acre, no manure.

The crop in 1891 was sweet corn and applied ten cords of manure to the acre. This piece of land is a rich loam, with a subsoil of gravel; the manure on this piece was ploughed in about five inches deep in 1891.

In 1892 used the same amount of manure and ploughed it in about six inches deep,

Cost of manure per acre 10 cords at $4.00,	$40 00
Ploughing and harrowing,	3 00
Eight bushels seed at 75 cts. per bush.,	6 00
Planting with potato planter,	2 00
600 lbs. phosphate applied with planter,	9 00
Cost of cultivating horse and man 1st time,	1 00
One man two days hoeing,	2 00
Cultivating with horse and man second hoeing,	1 00
Hoeing and weeding 2 men 2 days,	4 00
Cost of harvesting crop,	12 00
	$80 00

The number of bushels per acre of 60 lbs. each was 328, variety Early Rose and Hebron, and I commenced to market them July 20th.

J. Henry Nason.

Essex Co., West Boxford, Mass., Sept. 17, 1892.

This may certify that I have this day surveyed a potato field for J. Henry Nason of Boxford, containing one and one-third acres (or one and 19-57 acres is the exact measurement), from which Mr. Nason said he had raised four hundred and thirty-eight bushels of potatoes this year (1892).

James H. Webster,
Surveyor.

STATEMENT OF CROP OF POTATOES RAISED BY E. C. LITTLE, SUPT. OF CRYSTAL LAKE FARM.

Crop of potatoes which I enter for premium was raised on yellow loam, quite rocky. The crop of '91 was Ensilage corn, the land being broken up in the Spring and manure harrowed in. In the Fall, I spread on about six cord per acre, of coarse stable manure drawn from the city, and ploughed it in. In the spring of '92, April 20th, I

gave the land a good harrowing, furrowed the land and sprinkled in the furrows at the rate of about 900 lbs. of Stockbridge's potato manure per acre. I started with the intention of seeing how cheap I could raise potatoes. We dropped them by hand about 12 inches apart, using large seeds cut so as to leave about two eyes in a piece and one piece in a place. We covered them with a horse-hoe and did no hand labor on them afterwards, except one man one half day weeding out the hills. There were two acres in the whole. I used for seeds, Holton Rose, Beauty of Hebron and New Queen which came from Maine. Holton Rose and New Queen were the best. The New Queen were on the half acre which I enter, it taking about twelve hills to a fill a bushel. They were very large with but very few small ones. The rows were three feet and a half apart, marked with a marker. I tried an experiment with the Hebron to plant two rows of small seed, the result was I got about half the quantity per row. I also tried two rows with Bradley's Fertilizer. They did not do nearly as well as with the Stockbridge.

FINANCIAL STATEMENT.	*Dr.*
Ploughing one half acre of land,	$2 50
Harrowing,	1 50
Marking and opening furrows,	75
450 lbs. of Stockbridge potato manure,	8 40
Paris green,	60
Applying the same,	2 00
Two lbs. of seed potatoes,	5 00
Dropping and covering,	1 50
3 cords of manure at $5.00,	15 00
Applying the same,	75
Cultivating and hilling seven times,	3 50
Digging and storing,	15 00
Use of land,	3 00
	$59 50

	Cr.	
Ten bushels of small potatoes,	$2 50	
Eleven bushels medium,	4 40	
230 bushels at 80 cts.	184 00	
	———	$190 90

The produce of the half acre was 251 bushels at the rate of 502 per acre.

Yours respectfully,

E. C. Little.

This is to certify that I measured one half acre of land for E. C. Little, on which was crop of potatoes, entered for premium.

E. M. Emerson.

———

STATEMENT OF CROP OF CABBAGES, RAISED BY DANIEL A. CARLETON, NO. ANDOVER, MASS.

The half acre of cabbage, entered by me, were raised on a piece of run out grass land, that had had no manure for several years. The soil was a dark shallow loam, with a subsoil so stony, that it was impossible to turn the sod smoothly. About twenty loads of cow manure per acre was plowed under six inches deep, the ground harrowed and Brunswick cabbage seed sown June 15, at the rate of $\frac{3}{4}$ lbs. per acre, in rows $3\frac{1}{2}$ ft. apart, afterwards the plants were thinned so as to stand $1\frac{1}{2}$ ft. apart in the rows, $\frac{1}{2}$ ton Cumberland phosphate per acre, was sown in the drill. The piece was hoed three times. There are 3,750 cabbages on the half acre; by cutting and weighing what I consider an average lot, I find that they weigh about six lbs. each, which would give 45,000 lbs. or 450 bbls. per acre, allowing 100 lbs. per bbl.

COST PER ACRE.	*Dr.*
Plowing and preparing land,	$8 00
Seed and sowing,	2 00
Hoeing,	15 00
Phosphate,	17 00
Manure,	60 00
Cost per acre before harvesting	$102 00

VALUE OF CROP IN THE FIELD.	
7500 cabbages at 4 cts. each,	$300 00
Profit per acre,	$198 00

I hereby certify that I have measured a field of cabbage, entered by Daniel A. Carleton, for premium, and find it contains one half acre.

AMOS D. CARLETON.

STATEMENT OF CHARLES C. BLUNT, ANDOVER, CARROT CROP, ONE-HALF ACRE.

To the Committee on Root Crops:

The land occupied by the crop of carrots, which I enter for premium is a light loam with a gravelly subsoil. The crop of 1890 was grass; the crop of 1891, cabbage, manured at the rate of seven cords per acre after the cabbage crop was harvested. The land was well ploughed ten inches deep, and in the spring barn manure was used at the rate of six cords per acre and 500 lbs. of phosphate, and again ploughed, harrowed, brushed and sowed the 20th of May, in drills fifteen inches apart, using at the rate of two pounds seed per acre, hoed by boys through twice, weeded three times by boys, and the yield was 325 bushels on the half acre.

COST OF CROP.	*Dr.*
Preparation of land,	$4 00
Manure, 3 cords,	18 00
Phosphate,	7 00
Hoeing, weeding and thinning,	16 00
Harvesting,	7 50
Seed and sowing,	2 25
	$54 75

Cr.

By 325 bu. carrots at 50c. per bu., $162 50
Profit per acre, $215 50

Respectfully submitted,
C. C. Blunt.

I hereby certify that I have measured a field of carrots for C. C. Blunt, entered for premium, and find it contains one-half acre.

S. H. Bailey.

Having measured a portion of the carrots on the piece of C. C. Blunt, the yield is at the rate of 325 bushels on one-half acre, of fifty-five pounds to the bushel.

S. H. Bailey.

STATEMENT OF WALTER SMITH, METHUEN, CABBAGE CROP.

The crop of 1890 was a light crop of grass, not more than 800 per acre. The crop of 1891 was the same. There was a crop of grass fed off this spring and the land was ploughed the first of June, seed sown from the 18th to the 20th of June. They were manured in the hill with a mixture of wool waste, night soil and horse manure, about five cords to the acre. The crop has not all been gathered yet, so we have measured 1 square rod, and the crop is estimated from that rod.

COST OF CROP.	*Dr.*
Ploughing,	$2 00
Harrowing,	1 00
Furrowing,	50
Seed, 1-4 lb.,	1 00
Manure,	15 00
Putting in hill,	4 50
Planting,	1 50
Hoeing once,	1 50
Cultivating twice,	1 00
Harvesting,	2 50
Interest and taxes on land,	1 50
	$32 00

There was on the rod 2 1-2 barrels, or 400 barrels per acre. I am selling at $1.00 per barrel.

Crop,	*Cr.*	$200 00
"	*Dr.*	32 00
Profit,		$168 00

Respectfully submitted,

WALTER SMITH.

I certify that I measured the rod of land on which grew the two and one-half barrels of cabbage.

JOHN H. GEORGE.

STATEMENT OF CHARLES C. BLUNT, CONCERNING CROP OF PARSNIPS.

The land occupied by the crop of parsnips, which I enter for premium, is a dark loam, with a gravelly subsoil. The crop of 1890 was sweet corn, manured in the hill at the rate of four cords per acre. The crop of 1891 was squashes, manured at the rate of seven cords per acre. In the Fall after the squashes were harvested, the land was

plowed fine twelve inches deep, and in the Spring, barn manure, at the rate of seven cords per acre, was plowed in and six hundred lbs. phosphate used, harrowed and brushed, and four lbs. of seed sowed on the 10th day of April, and the yield was two hundred and ninety-five (295) bushels on the one half acre. Hoed through three times, weeding done four times, boy labor.

COST OF CROP.	*Dr.*
Preparation of land,	$4 50
Manure 3½ cords,	21 00
Hoeing, weeding and thinning,	24 00
Seed and sowing,	5 00
Harvesting,	12 00
	$66 50

	Cr.
By 295 bu. parsnips at $1.00 per bu.	$295 00
Profit,	$228 50

Respectfully submitted,
C. C. Blunt.

This certifies that I have measured a tract of land, having on it a crop of parsnips, owned by Charles C. Blunt, of Andover, and entered by him for a premium, and find it contains eighty square rods.

Samuel Thayer.

Having measured a portion of the parsnips on the above piece, the yield is at the rate of two hundred and ninety-five bushels on one half acre, of fifty-five lbs. to the bushel.

Samuel Thayer.

STATEMENT OF CHARLES C. BLUNT, CONCERNING CROP OF SUMMER TURNIPS.

The crop of summer turnips which I enter for premium,

is a second crop, coming after a crop of early potatoes. The soil is the same as the other crops, light loam. The crop of 1891 was cabbage, seven cords of manure was used. The crop of 1892 was early potatoes, planted in the drill, fine rotted manure with six hundred lbs. phosphate used in the drill, no manure or phosphate was used for the turnip crop. After the potatoes were dug, the land was brushed and purple turnip seed sowed at the rate of one lb. to the acre, on the 8th of August, in drill 14 inches apart, hoed through once, and thinned by boys. The crop is smooth and handsome and the yield is three hundred and fifty (350) bushels on the half acre.

COST OF CROP.	*Dr.*
Preparation of land,	$1 00
Seed and sowing,	1 35
Hoeing and thinning,	5 00
Harvesting,	8 00
	$15 35
	Cr.
By 350 bu. turnips, at 50 cts. per bu.	$175 00
Profit per acre,	159 65

This certifies that I estimate the turnips raised by C. C. Blunt, and entered for premium, on one half acre, to be three hundred and fifty bushels.

S. H. Bailey.

I hereby certify, that I have measured a field of turnips, for C. C. Blunt, entered for premium, and find it contains one half acre.

S. H. Bailey.

REPORT OF COMMITTEE ON FOREST TREES.

To the Trustees of the Essex Agricultural Society :

Your committee was called upon twice to inspect plantations of trees.

The first visit was made on Wednesday, September 21st, to the fruit farm of Charles W. Woods. Prof. John Robinson was joined to the committee for that day to fill a vacancy, and Messrs. George L. Hawkes of Lynnfield, J. Henry Hill of Amesbury, and the chairman were present.

We met Mr. Woods at the station in Newburyport. Your committee drove thence to Sea View Fruit Farm, on a beautiful day, passing through one of New England's most interesting streets, the main avenue of the old sea-port Newburyport, with its fine mansions, both old and new.

The out-of-door experience was a contrast to the wintry day of our successful "Institute" at Newbury, last spring; but the indoor hospitality of the citizens was continued at the end of your committee's tour of inspection.

Mr. Woods' description and personal opinions, which accompany this report are commended to your attention.

We first viewed the hedge that borders the highway, which had been injured by circumstances beyond the owner's control, but was otherwise in fair order.

The hedge that bordered the avenue by which the buildings are approached was in excellent order and deserving of praise. It was composed of arbor vitae trees kept low. It had been judiciously planted, and well cared for.

Beyond the buildings and bordering the road avenue, or road, was another hedge of tall Norway spruces, kept trimmed in on the sides, and looking well.

Your committee then inspected the vegetable and fruit lands.

A lot of apple trees on the farm are deserving of incidental attention, as being in an extremely healthy condition, both as to the tree and its fruit.

We recommend that the premium for ornamental trees, ten or more set on any street, road or farm, and cared for

five years, being $10, be awarded to Charles W. Woods of Newbury for his plantation.

The second visit of your committee was made to the farm of Mr. M. C. Andrews of Andover. The chairman was prevented from being present and requested Mr. French of North Andover to fill his place in inspecting the plantation, and he, with Mr. George L. Hawkes of Lynnfield, represented your board.

Mr. French reported to your chairman, in substance as follows :—that the plantings seemed a worthy attempt in tree planting and an example which well deserves encouragement and recognition. The trees were planted at various times and in several places, so it was somewhat difficult to judge of them as a whole on account of this and the different heighths and conditions, some of them being much more vigorous than others.

The premium appears to be for a single variety and the maples come under the offer of the society, so that the premium of $20 is recommended to M. C. Andrews of Andover, for his plantation of maple trees, not less than three years old, and not less than 1000 trees.

Mr. French refers to those of Mr. Andrews' trees that are on the roadside and raises the point that they would have been of better appearance if those of a similar kind had been planted together, and had the varieties not been mixed.

Mr. Andrews has forwarded a statement which accompanies this report, but if he feels inclined to enlarge upon it for publication in the "Transactions," it could not fail to be very useful in encouraging that work, which has resulted in being the most attractive feature in those localities that have, throughout New England, become attractive to people who have chosen them for their homes.

Planting on our roadsides was popular among a previous generation of New Englanders, and to them we of to-day are indebted for very much of the beauty and attractiveness of localities that would otherwise have been

no better for homesteads than stretches of farming lands, or pastures, unprotected by trees.

But these same farming lands, would be improved by a judicious roadside planting. Much of such results have started from the quiet work of agricultural and village improvement societies.

To show what influence such societies have often, let me state some information that I gained upon visiting large rose glass-houses that cover a number of acres on the other side of Boston, where the railroads do so much to accommodate the land owners and its patrons.

I knew that formerly all the roses grown there were shipped to New York City. I asked if the roses continued to be sent to New York, and was informed that they now went to Boston. Did the Massachusetts Horticultural Society's influence tend to so cultivate and increase the taste of Bostonians for flowers that they became a market for what had, previously to late years, been sent elsewhere, I asked. Yes, very largely so.

I want to impress upon our members the great value of our society, in establishing good ideas by keeping in the lead in the future as it has in the past, and in moulding public opinion as to what is best to do and have so far as our field of action can extend.

We shall have important measures to consider to-day, and they demand unprejudiced, but reasonably conservative thought.

Respectfully submitted,

FRANCIS H. APPLETON, *Chairman.*

STATEMENT CONCERNING HEDGE OF NORWAY SPRUCE AND ARBORVITÆ, GROWN BY CHARLES W. WOODS OF NEWBURY.

Twenty years ago I bought 1000 seedling plants imported through T. C. Thurlow. They were five or six

inches high, and the whole bundle could have been carried in an overcoat pocket. I set them out in a nursery, and cared for them by shading and keeping clear of weeds about three years, when they were two and one-half to three feet high, when I planted them in the hedge rows four feet apart, being careful to move them in a warm, moist day in May. Care was taken in having the ground mellow where planted, also to keep as much soil as possible on the roots and not allowing them to get the least dry. I saved a few in the nursery to replace in the hedge if needed, but by exercising great care in setting have had little trouble that way. I believe if great care is taken in setting a hedge, or, in fact, in setting any kind of trees there will be little difficulty in making them live. The soil is a light loam with a thin strata of clay three feet below. I have used no manure except wood ashes years ago, nothing since. Used a mulch of dry leaves for the first three or four years. After the trees met in the rows, commenced to prune each year the last of August or first of September, by cutting square across the top, also the sides. I keep them about five feet high and now they are one solid wall. About six years ago I commenced to let the row back of residence grow up to form a wind break by allowing the tops to grow but still pruning the sides. They are now twenty-five feet high and serve to break the cold northeast storms. My hedges if in a straight line would measure one-third of a mile. Would recommend to any one setting out a hedge to use wire for a fence as mine was somewhat injured by keeping a board fence too long before taking away.

Respectfully submitted,

CHARLES W. WOODS.

STATEMENT OF M. C. ANDREWS, ANDOVER, FOREST TREES.

I enter for premium not less than 1100 maple trees (mostly rock), grown and transplanted on my own land.

In addition to the above I have more than 300 of different varieties, viz. locust, birch, white ash, white pine, most of which were grown and transplanted on my own farm. Also white oak, yellow oak, locust, birch, walnut, which I raised from the seed.

I have spruce and many other varieties which I think are not called for in your list. All of the above named trees are not less than three years old.

I also enter for premium more than 100 ornamental trees, mostly by the roadside, others by the walks and driveways on my farm. My crops on the farm this season are very light on account of the great drought. Therefore a little help from the good old Essex Agricultural Society will help pay the taxes.

Yours truly,

M. C. Andrews.

REPORT OF COMMITTEE ON SMALL FRUITS.

The Committee on Small Fruits have attended to their duty, and respectfully report to the Secretary that they have made the following award :

$10. First premium, to J. Webb Barton, Danvers, for strawberry crop.

I was requested by the secretary of the society to visit the grounds of J. W. Barton of Danvers, and view his crop of strawberries, which he had entered for a premium. I went as requested and was the only one present of the committee, at that time the crop was about one-half gathered, and was quite good for a year when most fields of strawberries in New England were very poor.

The fruit this year brought good prices, owing to a deficit of production, which, with many growers, was almost a total failure.

In Mr. Barton's report he makes no mention of cost of marketing or the worth of his labor, or the cost of the use

of high priced land, and to my mind such reports are misleading. The owner's labor ought to be added to the cost as well as the hired labor. He cites the price he received in the city for his crop. Can any one go to market for nothing?

I never found any one that would market my products and find team for the fun of doing it.

J. S. NEEDHAM, *Committee.*

STATEMENT OF J. WEBB BARTON, DANVERS, OF STRAWBERRY CROP.

The land had been in grass several years and at the time of ploughing (1891) was largely June grass. The preparation of the soil was very thorough, and before setting plants, one ton of Canada ashes was harrowed in. The rows were four feet apart and the plants 18 to 24 inches apart.

The varieties were Haverland, Buboch No. 5 and Crescent, with Chas. Downing as a fertilizer. There were also a few Gaudy, Warfield, Sharpless and Belmont. On a portion of the bed the plants made poor growth and also some were killed by the white worm, larva of the June beetle. Considerable work was done filling in these places in July, and some time was also spent in placing runners. The plants were allowed free growth. In July, 500 pounds of ground bone was cultivated in. After the ground had frozen the bed was covered with meadow hay. This was removed in the spring and 950 pounds home made fertilizer applied, and the entire bed was weeded by hand. A large number of plants were taken up and I allow this to balance the first cost of plants. About ten days previous to the first picking, the foliage began to show signs of injury, and in the Warfield this proved serious enough to affect the fruit both in size and quantity.

The first berries were picked June 13, and the last pick-

ing for market was July 5th. Of the newer varieties I think Haverland proved the best. Bubach is also good but suffered more by wet weather. I should judge both would be too soft for shipment by rail to Boston.

Warfield except for the injury of the foliage would be profitable to raise, though poor in quality, unless left a long time upon the vine. Gaudy is a good berry but a shy bearer, and it is very doubtful if it has a place outside of the home garden. Beverly, of which I had a small bed in another part of the field, is a very beautiful berry, large size, and it promises to be very popular.

It is perhaps not out of place to say here that I shall fruit the next season about eighteen varieties, most of which are new. I will call attention to the fact that there is no charge in the account for marketing, superintendence of packing and interest on land.

3440 boxes strawberries,		$461 43
Ploughing, harrowing etc.,	11 15	
Setting and trimming plants,	8 41	
1 ton ashes and labor,	9 50	
Work on runners, &c.,	3 75	
Cultivating and weeding,	22 15	
Meadow hay and labor,	13 65	
Weeding in 1892,	8 15	
950 lbs. fertilizer,	13 50	
Cutting paths, &c.,	6 00	
Picking,	72 00	
		$182 20
Net profit on crop (32,475 sq. ft.),		279 23

RATE PER ACRE.

Product 4,613 boxes,	$618 60
Cost,	244 37
Net profit,	$374 23

J. Webb Barton.

This certifies that I measured the strawberry bed entered for premium by J. Webb Barton and found it to contain 32,475 feet.

CHARLES H. PRESTON.

REPORT OF COMMITTEE ON GRAIN CROPS.

The Committee on Grain Crops respectfully report that they have awarded premiums as follows, viz.:

$10. First premium, to C. K. Ordway & Son, West Newbury, for hay crop.

$10. First premium, to Henry M. Killam, West Boxford, for corn crop.

$5. Second premium, to Charles A. Andrew, West Boxford, for corn crop.

$10. First premium, to C. K. Ordway & Son, West Newbury, for oat crop.

$10. First premium, to Maurice H. Connor, West Newbury, for rye crop.

$5. Second premium, to Hartwell B. Abbott, Andover, for rye crop.

The Committee was first called to visit the farm of Mr. Abbott, early in July, where we saw several fields of rye besides the one entered for premium. The field to which our attention was called, was a splendid sight, as the grain was then growing in the field, some of it at a height above the reach of the Committee. We then felt quite confident that Mr. Abbott would receive the first premium and it was not until after considerable deliberation that we finally decided to give him the second.

Mr. Abbott takes two acres and ten rods of land, and raises at the rate of twenty-eight bushels and a fraction per acre, while Mr. Connor raises from one acre, 32½ bushels. Had Mr. Abbott staked off a single acre, we think his yield would have come very close to Mr. Connor's. Both crops were remarkably good ones; twenty bushels of rye per acre being the amount required for a premium crop.

Messrs Ordway & Son, usually give the Committee on Grain Crops a pleasant entertainment every year. This year we viewed the oat crop of sixty bushels per acre, and also a good hay crop, both for quality and quantity: at the suggestion of the Committee, the entire crop of hay from a field of five acres was weighed. Mr. Ordway could have taken a single acre, within the field and shown a greater yield per acre.

The two premiums for crops of corn, were awarded to Messrs Killam and Andrews of Boxford, and we believe Boxford usually receives the first premium for corn crop, therefore Boxford must be considered the banner town for corn raising, but we would suggest to the other towns that it will be for their credit to take Boxford down a peg, next year.

Daniel A. Carleton, Benj. P. Ware, Chas. B. Emerson, Sidney F. Newman—*Committee.*

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STATEMENT OF H. M. KILLAM, CORN CROP.

The crop of 1890 was hay, no manure used. The crop of 1891 was also hay, no manure used.

Soil varies from dark heavy loam at the foot of the hill, to shallow gravelly soil on top of the hill.

Ploughed in May seven inches deep, harrowed with "Nash sod crusher", and levelled with tooth harrow, furrowed both ways, three and one half feet each way, cost of plowing and other preparations $8.00 per acre; 24 loads of manure spread and plowed under $48.00; six hundred lbs. of phosphate applied in the hill $10.50.

Planted May 19th, dropped and covered by hand, six quarts of eight rowed yellow corn, cost of seed and planting $4.50, cultivated twice each way and kept as level as possible, cost of cultivating and hoeing $4.50, cut up and stooked Sept. 23rd, husked Oct. 24, cost of husking and harvesting $12.00; standing in stooks over a month both

stover and corn were well dried ; weight of stover on one acre, four and one half tons at $7.00 per ton, $31.50; weight of ears 7632 lbs., weight of corn from one hundred lbs. of ears was 80 lbs., cobs twenty lbs., shrinking one-fifth. Weight of shelled corn on one acre was 6105 lbs. 101¾ bushels at 75 cts. per bushel, $76.30.

COST OF CROP.		*Dr.*
Plowing and preparation,		$8 00
Manure,		48 00
Phosphate,		10 50
Seed and planting,		4 50
Cultivating and hoeing,		4 50
Harvesting,		12 00
Total cost,		$87 50
	Cr.	
Stover,	$31 50	
Corn,	76 30	
Total,		$107 80
Profit,		20 30

Respectfully submitted,

H. M. KILLAM.

STATEMENT OF C. K. ORDWAY AND SON, OAT CROP.

1890, this piece was in grass.

1891, it was plowed ten inches deep and harrowed, six cords of barnyard manure to the acre, spread broadcast, harrowed and planted with corn.

1892, the corn hills were split with a Randall harrow, plowed seven inches deep, harrowed and sowed to oats, three bushels to the acre, without manure or fertilizer of any kind. Seed, White Dutch oats of my own raising, the soil is sandy loam.

COST OF CROP.		*Dr.*
To plowing and harrowing,		$6 00
To sowing, harrowing and smoothing,		2 50
Seed oats,		3 75
Cutting with machine,		8 00
Drawing and storing,		2 50
Threshing and winnowing,		9 00
Cost of crop,		$31 75
	Cr.	
By 105 bush. of oats,	$52 90	
1½ tons straw,	13 50	
		$66 40
Profit,		$34 65

Sixty bushels to the acre.

Respectfully submitted,

C. K. ORDWAY & SON.

STATEMENT OF C. K. ORDWAY AND SON, HAY CROP.

1892, This piece of grass we enter for premium, contains five acres, ¾ of an acre of this piece was in rye last year, the remainder of the piece has been in grass, for four years.

The weight of the hay was 18,325 lbs. or 9 tons 325 lbs. at $20 per ton.	$183 25
Cutting and storing,	15 00
Profit,	$168 25

Respectfully submitted,

C. K. ORDWAY & SON.

STATEMENT OF HARTWELL B. ABBOTT, CROP OF RYE.

The raising of rye on the farm with which I have been connected for the last seventy-six years, can hardly be

looked upon in any sense as experimental; for I have good reason to believe that no year has passed without the raising of some acres of rye.

If I am not counted out under the "rules of the society," I desire to say that the crop to which your attention was called has been harvested with the following results.

Straw (all sold) 8395 lbs. at 80 cents per hundred,	$67 16
58 bushels of rye (about half sold) at 90 cents per bushel,	52 20
$57 87 per acre.	$119 36

The land on which the above crop grew, measures two acres and ten rods; is a part of an old pasture; in the last twenty years has been in grass and rye, being plowed once in six or seven years. It was dressed with twenty loads of good manure of thirty bushels each. Sown with one bushel of rye, six lbs. of clear red top and twelve pounds herds grass to acre.

Yours respectfully,

HARTWELL B. ABBOTT.

STATEMENT OF MAURICE H. CONNOR, RYE CROP.

The acre of rye which I enter for premium was grown on land that had been a strawberry bed for the past two years; it was well fertilized in 1890, but nothing in '91. The soil is a dark loam, the vines were plowed under in September with an Oliver chilled plough, that being the only one with which I can do it successfully; the rye was cut with a scythe the middle of July, bundled and stooked and left about two weeks, then hauled to the barn and threshed and marketed. The entire crop on the acre was 32½ bushels of rye and 4275 lbs. of straw.

		Dr.
2 bushels of rye at $1.00,		$2 00
Ploughing and harrowing,		3 50
Cutting and binding,		5 00
Hauling and threshing,		5 00
Marketing straw,		4 00
		$19 50
	Cr.	
32½ bushels of rye at $1.00,	$32 50	
4275 lbs. of straw at $18.00,	38 47	
		$70 97
Expense per acre,		19 50
Profit per acre,		$51 47

I hereby certify that I have measured one acre of ground planted with rye and entered for premium by Maurice H. Connor of West Newbury.

MOSES SMITH.

STATEMENT OF CHARLES A. ANDREW, CORN CROP, RAISED ON ONE ACRE OF LAND.

Cost of ploughing and harrowing,	$5 00
Cost of hoeing once,	5 00
Cost of seed and planting, (Used two horse planters.)	2 50
Fertilizer market bone,	6 08
Harvesting,	11 00
Cultivating eight times,	4 80
	$34 38

Crop of 1890, potatoes, well manured. Crop of 1891, corn, no manure, fertilizer same as '92. Crop, fodder 7502 lbs., corn on the ear, 6760 lbs., at 70 lbs. per bushel,

equals 95 bushels, 10 lbs. The soil is a heavy black loam, clay subsoil.

CHARLES A. ANDREW.

REPORT OF COMMITTEE ON TREADWELL FARM.

The Treadwell Farm has continued under the management of the tenant, L. D. Stanwood, during the year, in a very satisfactory manner to the Committee. The buildings and fences are in good condition; weeds have been kept under control, so that the general appearance of the farm is creditable to the society. The products are about as follows:—

35 tons hay, 225 bushels potatoes, 88 tons ensilage corn; 53 cords of manure have been applied that was made on the farm, from stock consisting of 15 cows, 4 heifers, 1 bull, and 2 horses. No apples or cranberries of any account were raised.

A new departure in the conduct of the farm, has been made this year, by the building of a silo; the Committee furnishing the material and Mr. Stanwood doing the labor of the stone and cement work of the foundation in the cellar, and part of the carpenter work. Mr. Stanwood has been required to keep an exact account of the production of a five acre lot of ensilage corn, and also of filling it into the silo which is given as a part of this report; also the entire cost of building a first class silo.

As the use of ensilage has passed through the experimental stage, and has been pronounced, after the most thorough tests in every way, the most economical method of providing feed for nearly all farm stock, the Committee think that in no other way could they have done the farming community more good than by presenting the result of this experiment, required of the tenant, showing not only the cost of ensilage in the silo, but the cost of building a first class silo without any unusual or forced

methods of cultivation more than any ordinary farmer would usually take.

The lot selected was plain land with a light soil resting on a loose gravelly subsoil, being fair corn land of easy cultivation, but not suitable for heavy grass crop. The corn was planted June 8th, part with Southern White corn and part with Stowell's Evergreen, sowed with Eclipse corn planter, and Thomas smoothing harrow was used in cultivation, but probably not as much as would have been profitable. The crop grew very well considering the amount of manure used and the quality of the land. A hard blow in August damaged it somewhat and lessened the amount to some extent, but on the whole, gave quite a satisfactory result, because it is what may usually be expected under ordinary conditions; there were six cords of barn manure applied per acre and plowed in, valued at $3 per cord at the barn. The charges on account of the crop are as follows:—

30 cords manure, at the barn, at $3 per cord,	$90 00
277 hours labor, by men, at 15 cents,	41 55
175 " " by horses, at 10 cents,	17 50
4 bushels seed corn,	6 75
	$155 80

COST OF FILLING SILO.

7 men, labor 6 days, 4 hrs. at $1.50,	$67 20	
1 pair horses, 6 days, at $2.00,	12 00	$79 20
Total cost of 88 tons in silo,		$235 00
Cost per ton of ensilage,		$2 67

Inasmuch as Mr. Stanwood had a driver for plowing and cultivating, which with well-trained horses is unnecessary and which took 57½ hours for a man at 15 cents, cost $8.62, reducing the cost per ton $.098. This deduction would make the cost of ensilage $2.57 per ton.

The silo was built in one bay of the barn from the cellar bottom to the beams of the barn. It is 24 feet high, 12

feet wide by 13 feet long, with capacity for 88 tons of ensilage, allowing 40 cubic feet per ton after settling 5 feet. At the bottom of the silo are two feet of stone wall laid in cement, upon which rests the frame made of 2 by 6 inch studding with girths across, and is ceiled up with single planed and matched boarding.

Cost of lumber,	$67 26
Cost of cement,	7 00
Cost of labor,	38 67
Total cost of silo,	$112 93

Respectfully submitted,

BENJAMIN P. WARE,
Chairman.

REPORT OF COMMITTEE ON MANURES.

To the Trustees of the Essex Agricultural Society.

Your Committee on manures would respectfully report that they have received one entry, and that is from Hon. J. J. H. Gregory, to whom they would award the second premium of ten dollars. The question of fertilizers for our farms is one of the greatest importance, and any experiment, that will shed light on this question is certainly valuable. The statement of Mr. Gregory is very interesting and instructive, and we deem it worthy of publication in the transactions.

E. A. Emerson—*for the Committee.*

STATEMENT OF J. J. H. GREGORY.

To the Committee on Manures.

GENTLEMEN :—I have often thought that the following experiment in the application of mineral manure was so clear and satisfactory in its result, that it should go on record, I therefore submit it for your consideration.

Six years ago I planted a piece of my hill land to onions. It was located on the top of what is known as Bear Hill, in the town of Middleton. The land was naturally strong and without being springy, like most land deposited during the ancient glacier period, never suffers from drought even in the driest season. The land, which had been in onions two or three years, received a fair coating of barn manure, about eight cords, and about 800 lbs. of onion fertilizer, composed of a combination which yielded, (in each case soluble), nitrogen 5, potash 9, and phosphoric 8 per cent. As the season advanced they did about as well as the average of seasons up to the time they had attained about half their growth of top, when it became gradually evident that they were losing their vigor. The thrift had gone out of them and I agreed with visiting friends, who were expert onion growers, the crop looked badly and a failure seemed probable. I had been in the habit for the last year or two of applying nitrate of soda, that most stimulating of fertilizers to my onion crop, just as it had begun to bottom, and with excellent results, but in this instance the crop had not advanced to that stage. Nitrate of soda supplies but one of the three elements needed for the onion, and here was a case where the plant was in a state of general starvation, caused, as I had reason to expect, by a deficiency of potash and nitrogen in the stable manure. I inferred this because of the fact that the crop started off well at first, which would be the effect of the soluble elements contained in the fertilizer and when these were exhausted any defect in the food element of the stable manure would be sure to make itself manifest. In accordance with this reasoning, instead of making my usual application of nitrate of soda only, I compounded a complete fertilizer, containing the three elements in their proper proportion, the same as I had used in the beginning of the season. This I applied at the rate of about eight hundred pounds to the acre, scattering it

broadcast over the piece, following immediately after with the slide hoe. Within a week the results were as striking as they were interesting, the onions began to rally, they had evidently begun to find the new supply of food, and from that time onward through the season, they kept on a vigorous and healthy growth and instead of being as it was, one of the poorest pieces among my twelve acres, it became one of my very best, and at the close of the season well fulfilled its promise by giving in a crop of over five hundred bushels of handsome onions to the acre. I think you will agree with me in finding in this successful experiment a good illustration of one characteristic of fertilizers, wherein from their very nature they can be used on growing crops in a way that it would be practically impossible to use barn manure; and, secondly, a demonstration that our crops may be changed from a promise of failure into a success by an intelligent application of an additional supply of plant food adapted to their need.

James J. H. Gregory.

REPORT ON THE EXHIBITION OF THE ESSEX COUNTY AGRICULTURAL SOCIETY.

Delegated by the State Board of Agriculture to attend the seventy-first exhibition of the Essex County Agricultural Society, I arrived at Lawrence on Tuesday morning, Sept. 22d, and readily found my way to the Fair grounds by the street cars passing conveniently close to the exhibition, which was holden on a large and reasonably smooth field by the border of the Merrimac, directly across which arose great piles of buildings, resonant with the hum of machinery; how significantly close agriculture and manufactures, the glory of New England, seemed to be, and what a train of thought was started only to be switched off into the stock yard.

The space was ample, more than enough to accommo-

date all the animals and the people who desired to inspect them. The arrangement of the pens was satisfactory, a long row of stalls for horses ran on the right or river side, in front, a wide space for exercising them, and then a parallel row of pens for cattle and a few sheep, while on a ridge conveniently far enough to be unoffensive, were the few enclosures for swine, a dozen in number, having some very good specimens of Chester whites and more mongrels. But the swine were numerous to what the sheep were, there being but three entries. My disgust at the small number of sheep was however changed to sympathy for the few men who own the 650 sheep in Essex County, and who suffer the infliction of over 10,000 dogs, and their owners of equal number, as shown by the county treasurer's books.

Of the neat cattle there was a very good show, not great in numbers, there being 57 entries, but containing some good beasts, the Ayrshires of Mr. French, and the Holsteins of Mr. Russell would make a show anywhere. Some very good cattle and steers were noticed, but as the details of the show and the premiums have been so fully printed in the city and county papers it is unnecessary for me to give them in detail.

The show of horses was uncommonly good, especially of colts, there was a good deal of handsome trotting and driving stock, showing high breeding, and I was pleased to notice several of those very serviceable animals, Percherons and their grades. The drawing match on a gently ascending road a short half mile from the grounds, was fairly tested by ox and horse teams, little shouting, and less whipping made the trial an interesting one. The plowing match was sharply contested, with single and double cattle teams and with horses, on the whole more satisfactory to the plowmen than to the plow manufacturers.

The show of poultry, that most important adjunct to prosperity on a farm, was unwisely small, considering that

the poultry products of Essex, aside from the living birds are over $225,000 annually.

But the glory of this Society's exhibition was in the various halls crowded with fruits, flowers, the products of the dairy, domestic manufactures, fancy articles and fine arts, while in great piles arose the liberal contributions from the mills, of woolen, cotton and mixed fabrics. Essex County has been always celebrated for good fruit from its first introduction by the colonists, while for vegetables the names of Gregory, Low, Buxton and Ware have made it famous through the whole extent of this country. I do not think such another display could be made in New England except by the Massachusetts Horticultural Society, of which these Essex men are a part, and generous contributors.

I am fully mindful of the extraordinarily fine displays made by the several granges and bear testimony to this evidence of the centering of agricultural interest in this old society.

The second day is devoted to an address, a dinner, and subsequent oratory. The address was a very sensible discourse on the evils of our criminal law and its enforcement, the dinner and the after speaking were about equally good. Much sorrow was manifested at the recent death of Dr. Loring, always prominent and interesting at the meetings of the Essex Society. Both days were exceptionally fine, but I shuddered at the thought of what the condition of the poor animals would have been in their unprotected condition if there had happened a cold pitiless storm, so likely to occur at this season of the year.

The question of a peripatetic society going from one town to another on different years, carrying their movable pens, with no protection for the beasts against sun and storm, would now as a mode of operation by any new society, be both unwise and impracticable, but with this society it is a condition, not a theory, not a question, but an accepted fact of over seventy years duration.

The Essex County Agricultural Society was founded in 1818, and held its first exhibition at Topsfield in 1820, so the one of this year is the seventy-first cattle show, ordered, conducted and maintained just as it was at Topsfield in 1820. I do not like their custom of holding the annual meeting on the first morning of the exhibition. The best men should and must attend to the election of officers and the transaction of business, and the same men should be on the grounds looking after the stock, or arranging the hall.

This society has been largely blessed with donations and legacies, which have been most judiciously managed, and it is quite independent financially.

The list of its officers and orators is simply an aggregation of the names of the foremost men in the county.

The agriculture of Essex County has never, from various palpable causes, been so influential nor so important as its manufactures, fisheries, and commerce.

Unless by those who with some care and study have read the early history of the settlement of Massachusetts Bay, I do not think the strength and the importance and the influence of the County of Essex on the state and on the country have been generally known and appreciated.

Before 1650 more towns, important then and now, were settled, established, and working in Essex County than in any other of the settlements, or colonies on our coast. Within thirty years after the first landing on Cape Ann, and the removal to Naumkeag, eight or ten thriving towns had been permanently settled, and stirring industries well commenced.

While the whole country beyond a line thirty miles from the sea-coast, except the starving, straggling settlers at Springfield, was a wilderness, unindented by the heel of the white man's boot, Salem, Lynn, Gloucester, Marblehead, Ipswich, Haverhill and Rowley, were busy spinning, weaving, fulling cloth, grinding corn, sawing lumber, tanning and dressing leather, making shoes and boots, making

glass, making bricks, making iron from the ore, building boats and ships from which they caught the fish, which when cured they carried to other countries, returning with freight for the necessities and comfort of the people.

Essex was providing for her people in the present, and commencing the foundation of those industries which have made her so prosperous and wealthy.

A short sketch will show some of the branches of business and where commenced.

In 1633, a corn mill was established in Lynn, said to be the second in the country.

1664, a tannery was planted at Ipswich.

1635, a rope walk at Salem.

1635, two shoemakers Rutland and Bridge commenced shoemaking at Lynn; which business largely increased, many men working their farms in summer and making shoes in winter.

1639, goat skins and hides were tanned and dressed at Salem.

1640, a fulling mill was built at Rowley the first in this country.

1643, ship building was commenced at Salem, and for a hundred years the shipping of Salem dominated the commerce of the country.

The same year it was commenced at Gloucester, four ships being launched there that year.

The same year iron works commenced at Saugus, supplied with bog ore.

1643, glass works were started at Salem.

The saw mill was slow of introduction here as it had been in England where no saw mill was allowed by the Sawyers till late in the last century; although invented and used somewhat in Germany, the English sawed by hand. Here some sawing was done in the pit, but most of the plank, boards, clapboards and shingles were rived or split and hewed; in 1631 they were run in that part of Massachusetts adjoining Es-

sex, afterwards set off to Maine, and in Ipswich in 1640.

In the same year the General Court under the new code granted to Joseph Jenks of Lynn, the exclusive right of erecting mills to be worked by water for all purposes. This Joseph Jenks was a remarkable man, and more than any one man gave that prominence in manufactures to Essex County which she has maintained to the present. He came to Lynn about 1640, probably with Mr. Winthrop, and engaged in the manufacture of iron; it is well said of him that he was the Tubal Cain of New England, a wonderful inventor and artificer, and deserves to be held in perpetual remembrance as the first founder who worked in brass and iron in the western world; by his hands the first models were made, and the first castings taken of many domestic implements, and iron tools; he was the first to make hollow castings. He constructed grinding mills, saw mills, and for iron working. He contracted with the selectmen of Boston to build a fire engine. He made the dies in 1653 for the new coinage of Massachusetts. He was expert at wire drawing, but the invention of his that comes nearest to us as farmers, was in the design and construction of scythes; the only scythe in use in England or on the continent, was a short thick instrument like a brush scythe; he lengthened and lightened it, and stiffened the back by welding on a rib of iron, and no essential change in scythes to the present time has been made on the invention of Joseph Jenks, two hundred and forty years ago. I dwell on this man and his achievements as belonging to the City of Lynn in the County of Essex.

In 1646 a general Market and Fair was established at Lynn. The fisheries off the coast, carried on by boats from Salem, Gloucester, Cape Ann, and especially Marblehead, had become most valuable and important, and as early as 1633, so well established, on account of the great size and goodness of the fish at "Marble Harbor," afterwards Marblehead, that ship loads were cured, salted and

sent to Spain, Portugal and the West India Islands, forming a large portion of the food of the Catholics on their numerous fast days, and also furnishing a cheap diet for the slave population.

In 1642, 300,000 dry fish were sent to market from Ipswich, and in 1647 Marblehead alone sold $25,000 worth. It was a great business and increased enormously.

These disjointed facts picked up from such historians as Hubbard, Winthrop, Palfrey, Lewis, and various town histories, and the old statutes, show somewhat the lead Essex County took in manufactures and fisheries, and to some extent display the energy, the patience, and the fortitude of the men who first settled on and around Cape Ann and Naumkeag.

In tracing the introduction of live stock it is not always easy to distinguish what were brought to Salem, Lynn, Boston and Plymouth, and very likely they were taken from one place to another on the coast and afterwards to the interior. One thing, however, is certain, that Mr. Winslow in 1624 returned in the Ann on a second voyage, and "brought three heifers and a bull, the first beginning of any cattle of that kind in the land."

In 1628, were ordered from England by the "Lyons Whelpe," twenty cows and bulls, ten mares and horses.

In 1623, the Dorchester Company landed live stock on Cape Ann, and in 1625 cattle and sheep were brought, and in 1629 one hundred and forty head of cattle and forty goats were landed at Salem; in 1631 a cow was valued at $111.00, yoke of oxen $177.00; in 1634 Hon. John Humphrey brought to his farm at Swampscott fifteen heifers, at this time valued at $75.00 each; in 1640 twenty sheep were appraised at $35.00.

In 1629 "twelve cows, three calves, two mares and two foles were ordered to be sold forthwith rather than to pay their keepe all winter."

1630, at Salem, wolves killed six calves.

1631, White Angel brought cows, goats, and hogs, and twenty-one heifers.

1631, Winthrop says "arrived ships bringing along all sorts of cattle, which with the blessing of heaven so increased that within a few years, the inhabitants were furnished not only with enough for their own use but were able to supply other places." In 1633, "farmers had large stock of cattle, sheep and goats, the cattle were fed in one drove and guarded by a man called a "hayward."

In 1635 two Dutch schooners brought in twenty-seven Flanders mares, sixty-three heifers and eighty-eight sheep. Winthrop says "It was hoped that these Netherland cattle, with the large yellow Danish cattle imported into the Piscataqua province by Gorges some years earlier, would increase the size of the Devon cattle brought by the English colonists.

"The sheep, goats and swine were kept on Nahant, which had been sold to Thomas Dexter for a sheep pasture by Poquannon, or "Black Will", as he was called, Sachem of Nahant; the settlers built a high fence of rails put close together across the beach near Nahant, to keep out the wolves, as those animals don't climb." Black Will was killed in 1633, so that Nahant must, according to the old records, have been a well stocked pasture for sheep, goats and hogs, before that date.

Importations of sheep are not mentioned often, they were few in number, and were probably darkfaced from Sussex and Hampshire along the south coast from which our ancestors sailed.

The large white faced sheep were mostly brought from the Texel and other ports of Holland. Swine are seldom noticed as being brought in, but they had bred so fast as to become at times almost a nuisance; the colonial statutes are full for a hundred years of restrictions on swine, ringing, yoking, enclosing, or shooting when doing damage. It seems they were troublesome to the fisherman, distroying the fish flakes, eating and trampling the fish, so that in 1633 it was ordered "that any swine coming within a quarter of a mile of the fishing stage at "Marble Harbor," shall be forfeited to the owner of the

stage." Later, in 1658, May 19, is this queer statute, "whereas there is a law respecting the regulating of swine in all townships to prevent harmes done by them, yett inasmuch as there is a necessitie of a more particular order respecting such towns wherein great numbers of swine are kept whereby many children are exposed to great dangers of loss of life or limbe through ravenousness of swine, and older persons to no small inconveniences, besides the sad consequences it may be of to the whole country, in times of sickness through their infection, it is therefor ordered by this court and authoritie thereof that the selectmen in the severall towns within this jurisdiction shall henceforth have power to make such orders in reference to swyne as may prevent all manner of damage."

Goats were brought in large numbers and before sheep, but for what use I don't understand, for I see no mention of them for their milk, for their skins, nor for food, with one exception, in 1638, on the arrival of some ships, the people of Salem made a great feast for them of "hogs, kids, venison and store of poultry." John Joselyn in one of his voyages, 1638, says, "they were the first small cattle they had in the country, he was counted as nobody who had not a trip or a flock of goats." In 1651, Mr. Edward Johnson writes of Lynn, among other things, "their cattell exceedingly multiplied, goates which at their first coming in great esteeme, are now almost quite banished and now horse, kine and sheepe are most in request with them."

These items will show the lead that Essex very early took in the manufactures and somewhat in the agriculture of the state from that time there was no census, no continuous record of our agriculture or our manufactures or commerce, till the very incomplete enumeration by United States Marshal Cox in 1810. It is not till within the past fifty years that any complete government enumeration of animals, and productions of agriculture

or of manufactures has been made in this or any other country.

From the imperfect enumeration of 1810, I have selected a few of the items most prominent and interesting in Essex. Of sheep they had 1600. Looms 1436, and spinning wheels without number, for it must be remembered that every yard of cloth of every description was woven on a hand loom in this and every other country, for the power loom was not invented till about that time. Of fur hats they made annually 27,500, worth two dollars and nine pence each. Boston-made hats were $5.10. They tanned, curried and dressed hides and skins to the value of $290,000.

Boots, shoes and slippers in number were 1,535,082 pairs at about 72 cents per pair, while Boston-made boots, shoes and slippers were valued something over $5.50 per pair. Saddlery in those days of horseback riding was made to the amount of $21,000 in Essex.

While there is no general enumeration of agricultural productions, we find mention of individual operations showing fine crops and great success in their farming.

Of course in the conditions, as they were of the settlement and subsequent progress of Essex County, much greater activity and advance were made in the manufactures than in its agriculture. Excellent crops were raised there. Mr. Colman in his report, more than fifty years ago, mentions crops of wheat, 32 bushels to the acre, Indian corn 115 and 117 bushels, potatoes 484-518 bushels, carrots 900 bushels, onions 651 bushels; from two acres of land were sold $600 worth of winter squashes in 1837.

Essex may also claim one or two specialties quite famous in their day. As Mr. Colman tells us, somewhere in the thirties a farmer of Byfield, a parish of Newbury, found in market a pig, of uncommonly fine points; by careful breeding and selection he made what is called the Byfield breed, which extended through this country, and was known in England as a superior breed at that time.

The Oakes Cow owned in Danvers, was a prodigy in butter producing, her record standing unequalled for years, down to the present records of Jerseys and Holsteins; in 1816 she made 484½ lbs. of butter besides suckling a calf four weeks, and having one quart of milk per day reserved for family use.

In later years the agriculture of Essex has been well kept up, and its methods and productions have been continuously recorded in journals and the reports of its agricultural society, which in fullness, excellence and completeness excel those of any of our other societies.

I append a few figures as curiosities, but from which no very satisfactory deductions can be made.

Of sheep they had in	1635	about	1,600
" " " "	1838	"	5,800
" " " "	1845	"	4,300
By the census	1885	"	17,760
By assessors books	1890	"	665
Of neat cattle in	1845	"	21,166
By census	1885	"	21,153
By assessors	1890	"	20,727
Of horses in	1845	"	5,140
By census	1885	"	5,358
By assessors	1890	"	19,773
Of swine in	1845	"	10,000
By census	1885	"	5,135
By assessors	1890	"	3,749

In 1845 the tonnage of Essex County was 240,000 tons; for 1885 the census does not give it intelligibly, but it was in 1845 equal to all the other ports of the state.

I should be false to my sentiments of sympathy and propriety on this occasion, and remiss in what would be expected of me by this society if I, a man from Franklin County, the northern third of the original county of Hampshire, should in writing of, and to, men descended from

the "Flower of Essex," content myself with a mere passing allusion to an event which, occurring more than two hundred and fifteen years ago, created a bond of feeling between the people of these two counties, unreleased even in this long lapse of time.

The colonists having strengthened themselves during the thirty years of their settlement on the line of the sea coast, determined to enlarge the bounds of their habitations, and to secure wider tracts, for better cultivation, and for more desirable pasturage. Having informed themselves of the character of the land in the valley of the Connecticut River, they concluded treaties with, and made purchases from those who claimed to be, and were acknowledged as the chiefs of various Indian tribes on the Connecticut River, covering the land from Springfield to the Deerfield river on the north.

It is true the consideration was small to those who bought the land, and would seem puerile and trifling to us, but the articles pleased and satisfied the Indians, and they sold.

They reserved a right to hunt the forests, to fish the rivers and streams, to cultivate some land, and to gather the nuts and berries of the woods, thus retaining really about all the rights they ever had or needed.

These Indians were quiet and well disposed, coming and going and living among the settlers, and this continued for twenty years till the brave and crafty Philip had combined all the Massachusetts Indians into a strong bitter league of extermination against the white settlers.

This war commencing in the south-eastern part of the colony, was soon carried into the settlements on the Connecticut River, and the flourishing and prosperous colonies from Springfield to Northfield were in great peril. It was determined to abandon the extreme frontiers of Northfield and Deerfield, and to concentrate all at Hatfield, Hadley and Northampton, then the strongest and ablest of the western settlements, and which were threatened by the

gathering hordes of Indians, numbering at times, even into the thousands. Accordingly it was deemed necessary, to thoroughly provision those towns, and as a superabundance of wheat had been grown and harvested on the fertile meadows of Deerfield, it was ordered that this, amounting to nearly three thousand bushels, should be sent by wagons and carts to the beleaguered colony of Hadley for security.

This large shipment was to be conveyed and protected by troops from the eastern settlements, who were sent up for that purpose, a large part of whom, under the command of Capt. Lothrop, about eighty in number, volunteers and drafted men, mostly from the various towns of Essex County, started on a beautiful bright morning, Sept. 18, 1675. About half of their journey had been accomplished, when in crossing a small, sluggish stream called "Muddy brook" in the south part of Deerfield, these men on a mission of mercy and necessity, were suddenly ambuscaded by hundreds of Indians who surrounded them from all sides, and at almost the first discharge of their arrows, and their guns, killed almost the whole escort, who fell, tinging with their blood the water of that little stream, giving it the baptismal appellation of "Bloody brook," which it has borne to this day; only three of the whole company escaped. Probably no event from the settlement of the colonies to the eventful fight at Lexington ever wrought such dismay and sorrow in the province of Massachusetts Bay as this. In the quaint language of the old historian "they were most untimely cut off, their dear relations at home mourning for them like Rachel for her children, and would not be comforted because they were not."

This sad affair has been celebrated in prose and in verse. A fitting commemoration was held on the ground in Sept. 1835, when in the presence of a large assemblage of the people of the vicinity, a neat marble shaft was dedicated to the memory of the dead, the occasion illuminated by a most eloquent oration by Edward Everett, delivered under

the shade of a magnificent tree. The unpretentious marble bears this inscription. "Erected Aug. 1838." "On this ground Capt. Thomas Lothrop and eighty-four men under his command including eighteen teamsters from Deerfield, conveying stores from that town to Hadley were ambuscaded by about 700 Indians, and the Captain and seventy-six men slain, Sept. 18, 1675." The soldiers who fell were described by a cotemporary historian as a "choice company of young men, the very flower of the County of Essex, none of whom were ashamed to speak with the enemy in the gate."

"And Sanguinetto tells you where the dead made the earth wet, and turned the unwilling waters red."

I am sure you will pardon me if I quote the opening and the closing paragraphs of the address of the silver tongued orator of Massachusetts on this occasion.

"Gathered together in this temple not made with hands, to commemorate an important event in the early history of the country, let our first thoughts ascend to Him whose heavens are spread out as a glorious canopy above our heads. As our eyes look up to the everlasting hills which rise before us, let us remember that in those dark and eventful days, the hand that lifted these eternal pillars to the clouds was the sole stay and support of our afflicted sires. On this sacred spot where they poured out their life blood in defence of that heritage which has descended to us, we this day solemnly bring our tribute of gratitude.

Ages shall pass away, the stately tree which overshadows us all shall wither and fall, and we who are now gathered beneath it shall mingle with the honored dust we eulogize, but "the flower of Essex" shall bloom in undying remembrance; and with every century, these rites of commemoration shall be repeated as the lapse of time shall continually develop in richer abundance the fruits of what was done and suffered by our fathers."

JAMES S. GRINNELL.

REPORT OF COMMITTEE ON AGRICULTURAL IMPLEMENTS.

With but few exceptions the exhibit of implements at the fair were confined to the lots exhibited by the local dealers, but these included a large variety, and on the whole the fair in this department was about up to the average. The only decidedly original implement was a mowing machine, in which each knife had an independent action, instead of, as usual, being firmly fixed to the cross bar. A gentleman who had seen one of the same kind in use, stated to the chairman, that while it worked well in heavy grass it did but poor work where the grass was light. The Committee regret that there was no opportunity to see it in action. There is an opportunity to improve the practical work of our society just here; we have plows compete in actual operation, and harrows, of late, to follow them, but no competing meeting of rival mowers. Now while it is always rather difficult to find leisure for leaving the farm in haying time, yet I believe if it were known that half a dozen or more different machines were to test their capacities in a contest with each other in some centrally located field, many farmers, especially those who were thinking of buying a mower, would manage to snatch a half day and be on hand. Had such a contest been had in years past it may be doubted whether that endless chain mower, which was one of the striking novelties at the last Mechanics' Fair, would ever have been put upon the market. As the matter now stands, farmers at our fairs, have no opportunity to see mowing machines, cultivators, seed sowers, hoes, forks, hay rakes, or hand rakes in actual use, and have, therefore, to make their selections to a large degree under the guidance of the exhibitor, who often times is merely a salesman from some agricultural house, repeating faithfully the lesson taught before sending him out, but in reality without a particle of practical knowledge about the implement over whose excellencies he is so eloquent. We

have no word of blame for the young men; they are hired to do certain work, to puff their machines, and they do it faithfully, if not well. Almost any farmer could give some illustration from his own experience of unfortunate investments made in the purchasing of implements, by reason of having but the statements of the salesman to guide him. I will give two that occur to me from my own. Some years ago a fellow townsman having obtained the agency of a new hay rake then being made, called on me. As at that time I happened to be in great need of one, on his eloquent setting forth of its merits, I purchased. When taken into the field the implement proved to be utterly worthless, and I learned soon after that the company had discontinued the manufacture of them. A while ago a newly patented seed planter was sent me on trial. A neighbor coming to borrow a planter that day, I gave him the new comer. In the course of an hour he came back with it saying it would not work, and on writing to the firm who sent it out, I was informed that fatal defects had been found and it had been withdrawn from the market. Somewhat recently I purchased a much lauded mowing machine, which by reason of a defect in the planning, proved to be nearly worthless. Coming down to the smaller tools, how difficult, yes, almost impossible it is to find a rake with teeth that are really steel, (the makers instead of steeling their rakes, prefer to steal our money!) teeth that will not bend and curve in all directions after a year of use. Our dung forks are often times no better. The days of honest old Partridge who made his forks so faithfully that having tines about fifteen inches long when new, they would wear until but four inches were left of them, and yet line as accurately with each other as when they first came from the factory. As I write this article I have one such by my side. Our hand hoes, I am happy to be able to say are, as a rule, most excellent in their composition, their design and their make, a credit to the manufacturer and an honor to American mechanics. Most of the different makes are thin

bladed and wear without either breaking or turning up at their edges. There are more varieties of this little but most useful implement, than farmers in general are aware of. It would not be a bad idea for some of our enterprising manufacturers, to gather samples of all the various kinds in use in our vast domain and exhibit them at that great gathering of the nations of the earth, the Great Fair. I believe such an exhibit would surprise even ourselves in the amount of inventive skill and superior workmanship invested in this little tool. I believe that many of us are apt to use our hoes too long; they have neither gapped on their cutting edges, nor turned up at their corners, and at first thought the suggestion that they should be condemned, strikes us as rather wasteful; but when the corners are rounded off it requires more effort to cut into the soil, and as the blade decreases in size, less earth can be moved with it. With first class hoes, at forty cents apiece no active farmer can afford to use one after half the area of the blade has been worn away. Among the many varieties in the market there are some that for specific use, are decided improvements on the standard kind. There are several kinds of toothed hoes, which I find valuable when it is desirable to gather at the least outlay of strength, the largest quantity of earth, of which the hoeing of cabbage is a good illustration. When the weeds are of any size these do not work as well as the common hoe. For a general purpose implement, I prefer a long, narrow thin bladed hoe; its narrowness helps it to slip in and out in places where the common hoe could not be used without great danger to the plants. Another advantage of the narrow blades is their utility in thinning bed crops. One variety of the narrow hoe found in the market is thick bladed and, as might be anticipated, is made of poor steel, such a kind as a poor man cannot afford to take as a gift. I find occasionally workmen who prefer white wood handles, but these are easily broken and when using them the lack of weight in such handles has to be made up by extra

muscular effort on the part of the workman. In using any kind of hoe where twitch grass is to be encountered, it is well to give the edge a touch on the grindstone, or fastening it in a vice, to sharpen with a file; in passing, I will remark that it is also well to bear in mind when dealing with twitch that a covering of three inches of earth will always smother it, and even a slighter covering will materially check its growth.

Two new implements I have used on my seed farm the past season, with great profit and satisfaction, which has not yet found their way into our markets. I refer to an implement for distributing Paris green in a dry state, directly on potato vines, without the diluting or mixing it with plaster, water, or any other substance, so that instead of having, as heretofore, to carry some hundreds of pounds of water or about half as much of plaster to protect an acre, a pound of paris green and ten or twelve in the weight of the implement is all our outfit. It is named "Cyclone Insect Exterminator." The principle is that of the old fashioned bellows, blowing the Paris green in an almost imperceptible dust over the plants. From a pound to a pound and a half is sufficient for an acre, which can be gone over in an hour and a half. I have protected my ten acres wholly by this means the past season *without a single leaf being injured.* By the old plan of using water as every farmer knows, at times the leaves are so badly burned, we are left in doubt whether the bugs or the Paris green have done us most harm. This is caused by that portion of the arsenic that has been dissolved by the water, (and there is always more or less of it) for the Paris green of itself will do no harm. In practice I find I need to caution my men to hold the machine so as to blow the dust especially into the tops of the vines, which is the real home of the bugs. Some farmers who have used it state that one thorough going over, with a retouch here and there was all they found necessary to protect their vines during the season. My own experience is that we need to go over

the vines as often with this as when using water or plaster, the saving being in the time, the cost of material, the non-injury of the leaves and the heavy work. The price of the machine is eight dollars. The other new implement I have alluded to is the Hallock potato digger. I have used "Allen's" for a number of years and a year ago tried the "Common Sense." Both of these require to be followed by the hoe on all lands, let them be either clear or weedy, but this new applicant for patronage on land *clear of tops and weeds* does such good work that beyond harrowing after it, no farther digging is needed. The potatoes are thrown onto a series of long, open, horizontal rods, that follow each side of the mold board from which they are separated from the dirt and rolled off as the digger moves along. Where the ground is weedy I find it necessary to remove these wings, when the work done is about the same as that by the Allen, with the advantage of being much easier to hold; neither of these cut the potatoes which cannot be said of the Common Sense digger. The machine is sold at $20.00. This is one of the class of implements it might be wise for farmers to own in company, for a day's work with it would dig the crop raised on the average of farms. Let me be clearly understood, to do its work thoroughly, the land must be *clear of green tops, weeds or twitch grass*; when these abound, it will do no better work than the Allen digger, though it is easier to work. It is not every good plowman can succeed with the Allen, but any man who can plow, can handle the Hallock. The work by all the three machines I have named, as far as opening a furrow goes, is of the same class as that done by a double mold board plow but better, in that it has more of a scoop to it, opening a broader and more rounded side furrow with the advantage of throwing out the entire crop, no matter how scattering may be the habit of any variety in growing its tubers. All kinds of potato diggers have this great advantage over hand digging. They do not cut or injure a fraction of as many potatoes; the best of them

not a dozen in a day's work, while some hands using hoes and hooks will manage to prong or otherwise mar five or more per cent. of what they dig.

What better way can there be to determine the real merits of new agricultural implements than by having them tested by our agricultural colleges, and these results published in the annual reports? I believe that it would be wise to have our patent laws so far altered that each introducer of any new agricultural implement should be ordered to deposit a sample in the agricultural college of his state. I believe that if this matter of having our colleges test and report on the real merits of new implements were once started manufacturers would so find it for their interest that it would become the law of custom on the part of both buyers and sellers to have the real status of every new implement determined by such intelligent and unbiased arbiters. We might then see "Implement Day" appear in the catalogue, when you and I and all of us might be invited to join the budding young farmers, with their corps of professors, to determine what improvements the cunning hand of the inventor had been able to make in the agricultural implements of the year.

JAMES J. H. GREGORY,
Chairman of Committee on Agricultural Implements.

REPORT OF COMMITTEE ON GRAPES, PEACHES AND ASSORTED FRUITS.

The Committee would beg leave to make the following additional report:

On entering on our duties as judges in this department, we found things in an unsatisfactory condition. One-fourth of our table had been taken by a catch-penny advertising notion, about which we failed to see anything connected with either agriculture, horticulture, or any of the liberal arts, and we were forced to pile up our exhibits as

best we could. Then when we came to arrange the plates, we found many plates, even of the finest fruits, with an indefinite number of specimens, when a certain number is called for, neither more nor less. This information we consider a very essential part of the entry clerk's duty, to communicate to the exhibitors. Although the directions are fully laid down in the books of the Society, many exhibitors have never had a chance to read the same. This same difficulty has been continually encountered in other departments, when liberty has been taken to rectify the errors and those judges been reprimanded for work in that direction. Having knowledge of these facts, we could only do our best to find the exhibitors or some of their friends and allow them to rectify a part of the mistakes. But however good the uncorrected exhibits might be, we were unable to award either premium or gratuity, because of there being a greater or less number of specimens on the plate than the rules of the Society called for. We would suggest that the attention of all entry clerks be called to this matter, which will give marked relief to the judges, and satisfaction to those who exhibit.

In awarding the premiums we took into consideration not only size, appearance and perfection, but maturity and adaptibility to the season and climate of Essex County.

GRAPES.

If we were to take the present season as a guide we should very much enlarge the list of grapes recommended for cultivation in Essex Co. But neither the season of '91 or '92 is to be taken as an average. We have seen and eaten this season some of the finest specimens of Isabella grapes—thoroughly ripened—that we have ever seen. Yet we should hesitate to advise the planting of that variety with the expectation of gathering ripe fruit oftener than once or twice in five years. There were many fine exhibits of Niagara, Pocklington and Concord, yet the most perfectly ripened fruit was found in the Moore's early, Worden and

Lady, which are pretty sure to give well-ripened fruit in the average season.

The exhibit of Black Hamburg grapes showed what could be done in the cold house, where there are no conveniences for artificial heat. Such results must be highly satisfactory to the cultivators.

The peach, plum and quince, which fifteen or twenty years ago were almost extinct, are fast coming to claim the attention of the horticulturist, and in our opinion should receive more attention from the Society. Within a few years we have been privileged to eat some most excellent seedling peaches raised in Essex Co. We would warn the raisers of peaches not to be too hasty about discarding a tree because its first crop of fruit is not up to their standard of excellence. If the tree is well cared for, the fruit will improve, not only in size and appearance, but quality, in each of its subsequent crops.

In the raising of peaches, the soil of America has given it one of its most flourishing homes out of its native land. The fruit is so highly prized in some countries that the trees are raised as pot plants, or as in England, trained on the buildings and fences like grapes, and they are thankful to get the fruit for the trouble. When we consider with what little trouble the trees can be raised, and how early they come into bearing, and how readily the surplus can be disposed of in these days of canning and evaporation, we wonder that more attention is not given to their propagation. The heading in of the trees, say from one-third to one-half of the year's growth, late in Autumn, after the leaves have fallen, will cause the remaining buds to become much stronger, and aid in prolonging the life of the tree. Many a young tree is ruined by allowing it to overbear. A pile of coal ashes immediately around the trunk of the tree is a good means for preventing the work of the borer and other insects that strive to destroy. The more wood you burn the better will be the ashes. A light, warm, gravelly soil is the kind in which they flourish best and live longest.

It has been said that "the exception establishes the rule." We think, however, that we can give a rule which has no exception. *A peach should always be ripened on the tree, a pear always off*; and we are quite confident that the rule governing the treatment of the peach is applicable to the plum as well, to which we would call especial attention. In our book of arrangements I find no mention made of either plums or quinces, as fruits worthy of the notice and encouragement from the Society. We think specific premiums should be offered for both of these fruits, and definite numbers designated for exhibition. With the plum we must keep in mind the adaptibility of the fruit to our climate and length of season. In plums the Green Gage takes the place that the Seckle pear does in its class, *at the head*; not for size, but for its pure, intrinsic worth. The Imperial Gage, a seedling from the above, is a fruit of excellent quality, and a hardy tree. Of some of the earlier varieties, we should class them in about this order: Washington, Jefferson, Guii, Yellow Egg, later followed by Bradshaw, Lombard, Golden Esperine and Coe's Golden Drop. Of the latter we have this year had opportunity to taste, at Lawrence, Sept. 22 and Boston Oct. 4. The first specimen was green throughout; the second not ripe one-half way to the stone. Therefore we should hardly feel justified in recommending this variety for cultivation in Essex Co. We have been giving our trees about one quart of coarse salt to the tree, sown broadcast under the tree in April. Have succeeded in keeping clear of the black knot, whether by the use of salt we cannot say, but we have much faith in the remedy for the disease—it certainly must be detrimental to the multitude of larvæ that are found in the soil—and its chemical action on many of the fertilizers used is decidedly beneficial.

QUINCE.

In the crop of 1892 we have seen some of the finest,

largest and best ripened specimens that we have ever seen placed on exhibition, the aroma of which carries the middle-aged person back to the days of his childhood, before the days of canning, not only of all manner of fruits, but fish, flesh and fowlas well—when the good, old-fashioned boiled cider apple sauce for a standard, with a small jar of peach or quince, or perhaps a little pure bee's honey in the comb—for special occasions—all the handiwork of the frugal housewife, sufficed to grace the festive board.

But now how changed! Not only have we multiplied the varieties adapted to our climate, but the four quarters of the earth are forced to contribute to our bill of fare. The quince will flourish in any good garden soil, with plenty of sun, though it appears to do best when planted near some small water course, perhaps near the outlet of the sink drain. Its greatest enemy is the borer, and the heap of coal ashes about the trunk of the tree is its best protection. Soap suds will well repay the trouble for the weekly application.

Fruits, which not many years ago were looked upon as rare luxuries, have come to be classed as the necessities of life. This fact is abundantly attested by the fine and constant displays which meet our view on every hand as we go about the streets. The demand is still increasing, and when we say that *five times* as much fruit is used to every thousand persons as fifteen years ago, we think the statement *below* the actual figure. And the general health of the community has been much improved thereby. Fresh, ripe fruits should be acceptable to every well-educated stomach.

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REPORT ON ESSAYS AND FARM ACCOUNTS.

The Committee on Essays and Farm Accounts respectfully report that their duties this year were light, as but few papers were submitted for their consideration.

But one essay was offered, and no premium was awarded.

Two excellent Reports were considered by the Committee, and to both premiums were given. Mr. J. J. H. Gregory, for his interesting and instructive report upon Agricultural Implements, was awarded the first premium of $10. Dr. J. W. Goodell's suggestive Report on Grapes, Peaches and Assorted Fruits, as the committee determined, entitled him to the second premium of $8.

The Committee think it would be well to stimulate our writers on agricultural subjects in some way, so that Essays may be more freely offered. With this end in view, as one means to be adopted, they would suggest the propriety of offering premiums upon special topics, to be proposed by the society. These topics might be selected by the officers of the society, by a special committee, by the committee on essays, or in any way satisfactory to the trustees.

Whether this experiment would succeed in increasing the volume of agricultural literature for the Society's Transactions, is of course uncertain, but it seems to be worth trying.

Respectfully,

G. L. Streeter, *Chairman.*

Gilbert L. Streeter, Salem; D. E. Safford, Hamilton; N. M. Hawkes, Lynn; G. B. Blodgette, Rowley; J. M. Danforth, Lynnfield.—*Committee.*

REPORT OF NEW MEMBERS.

The premium awarded to the person who obtains the largest number of new members from any city or town in the County, up to November 1st, is this year awarded to Francis H. Appleton, for forty-one new members.

The total number of new members to Nov. 1, 1892, was eighty-one, including those who, by receiving awards of

seven dollars or upwards, became members under the rule which deducts three dollars from each award to non-members for membership, which membership is for life, without assessments and entitles the member to a voice and vote in the Society's business, and a copy of its annual publication of its transactions. The following places furnished the new members.

Andover 5,	Manchester 7,
Amesbury 1,	Marblehead 1,
Beverly 10,	Methuen 2,
Bradford 1,	Middleton 1,
Danvers 4,	Nahant 10,
Georgetown 4,	Newburyport 1,
Gloucester 1,	Newbury 2,
Hamilton 2,	North Andover 4,
Haverhill 3,	Peabody 1,
Lawrence 8,	Rowley 1,
Lynn 1,	Salem 7,
Lynnfield 1,	Saugus 1,

West Newbury 2,

FARMERS' INSTITUTES.

The Society held eight Institute meetings, including one field meeting, during the season of 1891-92 on as many different days, forenoon and afternoon, at which the following subjects were opened by carefully prepared essays, and freely discussed by any and all persons present who cared to discuss them, viz.:—

1. "The Horse which is the Most Profitable for the Essex County Farmer to Breed."

2. "Originating, Crossing, and Improvement of Vegetable Seeds, and Varieties best adapted to General Culture."

3. "Management of Milch Cows."

4. "What Benefit do Farmers derive from the State Board of Agriculture."

5. "Economical Milk Production."

6. "The Usefulness of the Boards of Agriculture."

7. "What the National Government is doing to perpetuate the Salt Sea Fisheries."

8. "Fish as a Fertilizer."

9. "Sheep Husbandry."

10. "The Laws of Competition as affecting the Massachusetts Farmer."

11. "Fruits." The Best Varieties and Best Methods of Cultivation."

12. "Vegetables and how to raise them."

13. "Utilization for Plant Food, the Wastes of the Ocean."

14. "The Judicious Use of Manures."

15. "Field Institute."

The eightieth "Farmers' Institute" of the Society and first of the season was held at Georgetown, on Tuesday, Dec. 29, 1891, and proved to be of much interest to those that were present, although owing to so much sickness by "La Grippe" in that vicinity, there was a small audience as compared with the usual meetings. President Appleton occupied the chair, and in a few introductory remarks alluded to "the Horse" the subject for discussion; he said this topic had suggested itself partly from the fact that in looking over the farm stock of Essex County, the horse is the most valuable, an animal every one becomes attached to and likes to have for pleasure or work, and according to statistics there are over 20,000 horses in Essex County today, after which he introduced the Hon. Charles M. Winslow, of the Vermont State Board of Agriculture.

Mr. Winslow expressed pleasure in meeting so many farmers of Essex County, and spoke of the intimate connection of the horse and mankind; we all have to have them and he earnestly advocated raising them. There are

many breeds and every farmer should raise the breed best adapted for the work he was to do. He spoke very highly of the Morgans and Hambletonians as being the best all around horses for farmers, when they did not want extremely heavy horses like the Clyde or Percheron, for slow heavy work.

Mr. Winslow confined himself principally to the breeding of the family or road horse, and would not advise trying to raise trotters. The American road horse comes from a breed originating in England, and could be traced back to the Arab steed, just as the English thoroughbred can; he makes the best horse for the farmer.

Mr. Winslow gave a very interesting account of the original Morgan horse which was stolen from a British Officer and taken to Connecticut; this horse was the sire of old Justin Morgan, which animal was taken to Vermont; Justin Morgan was used by ladies under the saddle and there was no stronger point of his docility than this, from the progeny. The Hambletonian is a direct descendant from the Morgan and Messenger, and therefore I think the Hambletonian the best horse for general purposes. If a man is going to raise a colt he wants to be particular about the mare, for one good brood mare will give better satisfaction than a hundred that were good roadsters but had vicious traits in their character; the mare gives character to the colt; he spoke of ascertaining the pedigree of the mare, and if he found several generations back there was a balker or kicker among them he would condemn her as a brood mare. The sire should also be of good disposition, he wanted a horse that had energy and life, strength of limb, and a good mild eye. In breaking a colt, Mr. Winslow said, he would begin as soon as it was born by putting his arm around its neck and talking to it, so that it would have confidence in you, and you would have your colt broken before you knew it; he would never load a colt heavily, and never strike him when frightened. Colts, he thought, could be raised at a profit to sell for

$250. In closing he advised all to beware of the jockeys, and do your own breaking and training, then you know all about your horse.

Mr. Winslow answered manyquestions, among others he thought the mare had more influence on the disposition, and the sire more upon the gait of the colt.

Mr. Butler of Georgetown, said he found that the breeding of horses depended full as much on conditions of locality as upon quality of stock; he believed in Essex County where you could buy horses very reasonable, he doubted if colts could be at a profit with hay and grain at the prices common to this locality. Other remarks were made by several gentlemen after which the meeting adjourned for dinner, prepared by the Ladies Aid Society, in the basement of the Congregational church

AFTERNOON SESSION.

There was a larger attendance in the afternoon when President Appleton introduced Hon. Aaron Low of Essex, who had a carefully prepared essay on "Originating, Crossing and Improvement of Vegetable Seeds, and Varieties best adapted to General Culture."

Mr. Low spoke from his own experience and practice as a grower of seeds for thirty years; he alluded to the important principle in nature of reproduction, especially as shown in the varieties of plants and vegetables. There is no crop on which the common farmer depends so much as on the potato, which was introduced into Europe sometime during the latter part of the fifteenth century, but it was a long time before the people used it as a common food. There is no more difficult vegetable to produce new kinds from than the potato. It is propagated by divisions or slips of the tubers, the kinds now cultivated seldom produce any seed balls, it is then very difficult to procure seed intentionally crossed with choice varieties from which to produce new ones.

Mr. Low advised the early planting of potatoes to escape

the ravages of the beetle and the blight upon the young plant, and also of the higher price obtained in the market for early potatoes; a satisfactory plan among market gardeners is to have every fourth row of potatoes and plant it to squash about the 15th of June, thus utilizing the land for two crops, and the use of fertilizer was advocated as cheaper and better than manure.

In cabbages the speaker said it was an easy matter to obtain new varieties by setting two varieties alongside of each other, so that the pollen of the blossoms of one should drop on the other; the market gardener who secures a good crop of early cabbage a week or two before his neighbor and gets them to market, not only finds quick sales, but at a price where he gets a handsome profit not often produced by other vegetables. Celery has been in great demand for the last five years and its cultivation has been much simplified by the introduction of new varieties. High manuring is required. The best variety is the Golden Self Branch. Land used for early peas, beans or sweet corn can be utilized for celery as a second crop.

Considerable space was given to onions and much credit to Daniel Buxton of Peabody, for perfecting the Danvers Yellow Globe Onion, which brings a higher price than any other.

Peas can be easily improved by crossing, which is done by planting two varieties noted for their sweetness beside each other and the pollen of the flowers will readily mix.

For beans, Early Champion Bush, Valentine, Golden Wax, and Wardwell's Kidney are among the best. The pollen is transferred by bees and it is almost impossible to keep varieties of beans distinct even if planted some distance apart.

Of sweet corn the early Burbanks, Early Corey, Perfection and Crosby were recommended, and if a fair crop and average price the results ought to be satisfactory.

Mr. Geo. A. Rogers of North Andover, said he had

tried the past season to see if it were possible to raise twenty tons of Hubbard squashes to the acre and had obtained only a little more than one half that amount. In answer to a question Mr. Low said the largest crop of squashes, with another crop he knew of being raised, was in Dedham, where 9 tons of squashes and 200 bushels of potatoes had been raised on an acre.

After this a general discussion took place between Mr. Butler of Georgetown, Mr. Parker of Groveland, Mr. Knight of Newbury, Warren Brown of Hampton Falls, Mr. Rogers, and others.

The 81st Institute of this Society was held by invitation of the Newbury Farmers' Club at Parker Hall in that town on Friday, Jan. 15, 1892.

The subject for discussion in the forenoon was "The Management of Milch Cows," the principal speaker at the morning and afternoon meetings being Secretary Sessions of the State Board of Agriculture. There was a large attendance at both meetings.

President Appleton presided, and before introducing Mr. Sessions took the opportunity to say that it was with great pleasure that the Society met with so active a society as the Newbury Farmers' Club in holding an Institute, and, although the weather was so inclement as to oblige them to come inside, according to the old maxim it was taking care of their grass for them the coming season.

Mr. Sessions said that he did not expect that his subject was at all new to Essex County farmers and therefore asked the audience not to be critical.

He dwelt first on the importance of his topic here in New England. In 1880, according to the census, there were 13,000,000 milch cows in the country, and he had no doubt but at the present time there were 16,000,000 cows requiring 60,000,000 acres of land and the labor of 700,000 men to keep the milk supply of the country good. He said what was needed especially for milk farming was a cow with a

large flow of milk of the proper standard, and he believed the state standard should be lived up to whether right or wrong. Then what was also needed was a cow to produce a calf of value, well made, with good quarters, well developed in those parts from whence the beef comes, for he believed the time was coming when the production of beef would be profitable. It was hard to get such cows if you depended on buying. Having got such a cow, why not perpetuate her qualities by raising calves ? The speaker recognizing the difficulty with milk farmers who asked, how shall we raise calves if we sell our milk, advocated bringing the calf up by hand by feeding flaxseed oil meal, wheat bran or middlings after a few weeks' old. The wheat bran or oat meal should be stirred in boiling water so as not to lump. Calves raised in this way were more gentle and kind, and not half the trouble to take care of. The speaker had raised about twenty calves a year and always used the thermometer in every mess of feed. It should be the aim to teach the calves to eat oil meal, bran, etc., dry as early as possible. The dry feed increases the saliva. At the age of three or four months they may be given a ration of grass or rowen hay to keep them growing, and at the age of two or three years the heifers may take their place in the herd. In regard to pastures, if a cow has got to hunt for food in a short pasture, it will be felt at the pail. So green fodder should be used and it is his practice to feed it at the barn. Cows should always be fed systematically, giving the same rations at the same time every day. He would sow winter rye in September for early Spring feed, and oats or barley sowed in the spring make good feed after the rye. Pasture grass on an old sod is as near a perfect food for the cow as anything you can get if there is only enough of it. It was important that a good cow should be liberally fed, through the milking season especially. Dairy men ought not to study how little they can keep a cow upon. Until there is a surplus she will not secrete milk unless at the expense of her system. The cow should be

fed and milked regularly, so as to keep her in an even frame of mind.

Mr. William Little of Newbury believed in following mother nature with the calf, instead of studying how to cheat the calf. If he had not milk enough for it until it was eight or nine weeks old he would buy more and feed it.

Remarks were made by Mr. Holt of Andover, Mr. Ware and Mr. Bailey of Newbury, after which the meeting adjourned for dinner.

AFTERNOON SESSION.

The afternoon meeting was called to order at half-past one, when Mr. Sessions delivered an interesting address upon the subject "What Benefit do the Farmers Derive from the State Board of Agriculture."

He spoke first of agriculture as the earliest occupation of mankind, and the calling upon which other industries depend. Wise rulers are now beginning to realize that no government can prosper without a thrifty agriculture. He quoted Washington's address in 1796, in which he said it would not be doubted with reference to the individual and national welfare, that agriculture was of primary importance. In speaking of the work performed by the state board, reference was made to the effectual stamping out of the pleuro-pneumonia in 1859 and 1860, when the state appropriated $100,000, and the disease was eradicated. If the state board had done nothing more that would have justified its establishment. Allusion was also made to the state board for its efforts in securing a law compelling the sale of commercial fertilizers under a guaranteed analysis, and for the protection of the farmer against impostors. Before the passage of that law the selling of fertilizers was a cut-throat business. The state board was instrumental in establishing the Agricultural College in 1862, and now the state board are the trustees of the college, with a marked improvement of what it was formerly. The special mis-

sion of the state board has been to look after the agricultural societies of the state. It has not desired to act arbitrarily, but for the last three years it has been tightening its grasp on societies that had been a little lax, with a resulting great improvement. The Dairy Bureau went into effect last September and gave good promise of excellent results.

In answer to a question Mr. Sessions said that the state board had no control over the Cattle Commissioners, they being an independent board.

At this time quite a lively discussion took place in regard to some of Mr. Sessions' suggestions between Mr. Gregory, Mr. Little, Mr. Bailey of West Newbury, E. A. Emerson and others, after which the meeting adjourned, after passing a vote of thanks to the Newbury Farmers' Club.

The 82d Institute was held at Memorial Hall, Methuen, Friday, Feb. 5th, 1892, the subject for the forenoon being "Economical Milk Production," by Prof. James Cheeseman, Secretary of the New England Creamery Association.

Prof. Cheeseman first considered what kinds of feed should be provided, and said that the fodder in use is practically the same through all of the northern states, and the conditions of success depend more on the individual operator than on the feed. The chief feeds he mentioned as being corn in its various forms, cotton seed meal and clover. Mr. Cheeseman said he considered corn ensilage and clover as prime factors in the economic production of milk, and would also recommend oats, but, said the speaker, there is nothing so cheap as ensilage, which could be raised at from $20 to $50 per acre with a product of twenty tons to the acre. How much feed to give the cows, and how to apportion it must be determined by the individual feeding it; his own experience was from 30 to 45 lbs. per day. He next considered the breeds of cattle, and evidently took but little stock in the Hol-

steins, and said in a grade cow he would not have over 50 per cent. of Holstein blood. Milkmen must become breeders. The number of good cows that it will pay to feed at a profit are becoming scarcer, and tuberculosis is on the increase in all parts of the world. He thought a cow of about 1000 lbs. weight about the right size to keep. He did not believe in a pure bred cow, the Jersey's milk being too rich, but that which remains after the top is turned off is very blue. As a cross he favored the offspring of a Guernsey bull and a grade cow. Its milk product equals that of the Ayrshire in quantity, and equals or exceeds it in quality.

He next spoke on the matter of buildings, believing that cheaper barns could be built at a cost of not over $25 to $30 per cow. A bad feature of the Massachusetts barns are the leaky scuttles behind the cows, through which too much cold air comes in winter and is very apt to result in disease.

Returning to the subject of feed, he said that feeding ensilage does not affect the taste of milk as it does of butter. With cows large enough to eat fifty pounds of ensilage a day no bad results are noticed in the milk, and with meal at present prices he would not use the corn plant in any other way, although he believed in feeding some hay with the ensilage. Cotton seed or new process linseed oil meal at present prices, with good manurial value he considered better than gluten meal; gluten meal is too dry. He gave the following as a good formula for an economical milk feed: Ensilage, from 35 to 50 lbs.; clover hay, 6 to 11 lbs.; mixed grain, composed of 15 parts cotton seed meal, 15 parts new process linseed oil meal, 20 parts rye bran, and 50 parts middlings; total, 7 to 10 lbs. One thing that needs remedying is the waste of over production of milk. This should be regulated by the dairies. The milk is needed, and can be used to good advantage at home on the farm, either by feeding to young stock or making butter and using the skim milk in

some way at a profit. As it is to-day, at certain times, large quantities are turned into the sewers.

There was quite an animated discussion among several gentlemen present on the subject, but no one seemed to doubt the speaker's statement, and there was little or no difference of opinion in the matter.

B. P. Ware expressed himself as strongly in favor of ensilage, and also that dairymen should raise their own cows. He also indorsed the state law that 13 per cent. solids was not too high as a standard, and believed if milk did not come to that standard it was through negligence or poor feed.

In response to questions Mr. Cheeseman said that he would not recommend a feed of ensilage and clover entirely. He suggested that farmers could with economy raise peas and oats to feed in place of grain when it is high, and he also recommended the Canadian practice of feeding a mixture of peas and oats, raised together and ground together.

Hon. J. J. H. Gregory spoke of feeding large quantities of squash to cows with good results. It made a good quality of milk. He also spoke of the richness of milk where cows had good, rich feed, and compared it to milk from cows fed on a poor quality of food.

At the afternoon session Hon. William R. Sessions spoke on the subject "Usefulness of the Boards of Agriculture," the address being substantially the same as the one given at Newbury, but in addition to that, spoke at some length on the advisability of a law for analyzing nitrogenous feed stuffs. Under such a law manufacturers and dealers would be required to maintain a certain standard, and the farmers could send samples to the state chemist for analysis free of charge. Other remarks were made by Hon. J. J. H. Gregory, James O. Parker, Esq. and others.

The 83rd Institute was held at Plummer Hall, Salem,

in conjunction with the Bay State Society, Friday, Feb. 19, 1892, the subject under consideration being "What the National Government is doing to perpetuate the Salt Sea Fisheries. Before the speaker, Col. McDonald of the U. S. Fish Commission, commenced on his subject, President Appleton invited Mayor Rantoul of Salem to make some remarks. He welcomed the members of the Society to Salem, in behalf of the city, and made reference to the early fisheries of the colonies, to the symbolizing of the codfish as the emblem of early wealth (hence the term, codfish aristocracy), and to the great abundance of bass fish in Bass river in the early days. President Appleton then introduced the speaker, Col. McDonald of Washington, D. C., who said he was poorly qualified for the task he was about to perform, but his paper showed he had given the subject great care and thought. The inquiry, he said, is a pertinent one, and if the work with which the commissioner is charged is distinctly economic in its aims he must show results adequate to the expenditure incurred, or else be judged incompetent. The commission prosecutes three different lines of work, but all contributing to one ultimate end, which is to increase the resources of our waters, to render our fisheries more productive and profitable, and to improve the conditions for our fishermen.

The speaker paid a warm tribute to Prof. Baird, assistant secretary of the Smithsonian Institute, who was well-fitted for laying out and prosecuting the desired work.

He first convinced himself that the fisheries of the New England coast were on the decline; he then proceeded to see what could be done to remedy matters, but first he had got to make himself acquainted with the life and habits of all the species of fish in these waters.

The commission has proceeded upon the lines marked out by Prof. Baird, to arrive at a complete life history of all the inhabitants of the waters, to study their habits, determine their food, to determine their distribution and migration.

Col. McDonald illustrated the scope and purpose of the enquiry as now conducted, by reference to three investigations now in progress. First of these he named that on the Pacific Coast by the Steamer Albatross, stationed there in the winter of 1887-8. He next spoke of the oyster investigation in Rhode Island, Connecticut and New York. The oyster beds of New England and the middle states are subject to the attacks of drills and starfishes, which do several thousand dollars' worth of damage every year.

For three years the Schooner Grampus has been investigating the temperature relations between the cold Labrador current and the warm waters of the Gulf Stream.

In conclusion, the speaker related the successful efforts that had been made in the artificial propagation of cod and shad.

At this time several gentlemen in the audience commenced to ask questions of Col. McDonald, who answered all, and in that way a general discussion followed until adjournment for dinner.

AFTERNOON MEETING.

In the afternoon the subject for discussion was "Fish as a Fertilizer," opened by William H. Bowker, well-known as the manufacturer of Bowker's fertilizer. Mr. Bowker spoke from a business point of view, believing in catching all the fish you could or where you could, whether for food or fertilizer. The first great by product for plant food is stable manure, and another is bone—the latter being sold to fertilizer manufacturers or directly to the farmers. Mr. Bowker stated that experience had proved the value of fish as fertilizers, and quoted Prof. Trumbull as saying that the Indian names of menhaden and porgie signified "fertilizer," and that the Indians were accustomed to use this species, together with herring and alewives, to enrich their corn fields. Fish is no better source of plant food than many other substances. It is the source of plant food because it

contains nitrogen and phosphoric acid. In some sections it has been injudiciously used, on some parts of the Cape, for instance, they believe it has exhausted the soil, and doubtless this is so, as large quantities of oily fish ploughed in year after year will fill the soil with fatty matter, which, by rapid decomposition, parches, and tends to burn out, the organic matter. But fish, properly treated, is a valuable source of plant food, and, said the speaker, from an economic point of view, every pound of fish waste should be utilized, and every fish that can be caught out of the sea taken, whether it be by hook and line, net, trawl, siene or any other way, for it is a means of returning, in some measure, the lost fertility that is continually pouring into the sea. Mr. Bowker estimated that 5000 tons of fish waste are produced along this coast.

But the great source of plant food from the sea is the menhaden or porgie, which are evidently the scavengers of the sea, as many specimens which have been dissected show. A ton of menhaden fish, when the oil is pressed out and dried, to 12 per cent. moisture, contains 300 pounds of actual plant food, worth in the market from $30 to $32 per ton at retail. The use of these fish as a fertilizer has brought down the price of our best commercial fertilizers from $80 to $35 and $40 per ton.

As far as can be ascertained menhaden are not to any extent food for the food fish of the sea, so that the taking of them in a wholesale way is not an injury to the food fish industry in this direction. He quoted authorities, to show that trawling, seining and netting fish by the most improved methods did not materially lessen the supply, and said that if fishermen were still obliged to resort to the old methods, the demand would be so much greater than the supply that few could afford fish for food. On the other hand he believed that increased facilities for catching fish should be encouraged.

Mr. Ware did not agree with Mr. Bowker that the menhaden are scavengers. He said he lived within ten rods of

the ocean, and formerly took large quantities of menhaden for the fertilizing of his land. Now there are none come there except in small quantities, and those at a distance. He believed that the wholesale seining of them had killed them off, or driven them away.

Mr. Gregory said that cod, hake and haddock are disappearing rapidly from our shores. They are much dearer than formerly, though he agreed with a statement advanced by Mr. Bowker that a larger population and vastly increased methods of transportation had increased the demand and thus made them dearer. But he believed the price had increased out of proportion to the population.

There were other remarks by Mr. Andrews, Mr. Hawkes, Aaron Low and others, and at 4 o'clock the meeting adjourned.

The 84th Institute was held at Beverly, Friday, Feb. 26, 1892. President Appleton occupied the chair, and after a few brief remarks he invited the Rev. Mr. Butler of Beverly to make some remarks, which he did in a humorous strain. Among other things he said it was one of his greatest enjoyments to tramp across the fields with his dog and gun, and in doing so he had fallen in with and made the acquaintance of very many farmers, whom he numbered among his pleasantest friends. He also spoke of his being brought up on a farm and his father, who is well advanced in years, but still an active farmer.

President Appleton next introduced the speaker of the morning, who was not any stranger to the farmers of Essex County, Hon. John E. Russell of Leicester, whose subject was "Sheep Husbandry."

Mr. Russell, in opening, spoke of his first appearance before this Institute and of his former position as Secretary of the State Board of Agriculture. If he had held the office for five years he said he should have considered his mission a failure if the number of sheep kept in Massachusetts had not been doubled, but he was, however, still pursuing his

mission and urging farmers to keep more sheep, although sheep were gradually declining. The great objection, heretofore raised by farmers against raising sheep, was the damage by dogs. That objection, said the speaker, no longer exists. The laws have been so amended that the farmer can obtain not only the full value of his sheep, but for all the damage done to his flock.

The question now, then, is sheep husbandry profitable? Some farmers here in New England say we cannot keep sheep enough to make it pay. This is a mistaken idea. Ohio, one of the greatest sheep-raising states, only averages 33 to a flock. Michigan, another sheep-raising state, averages only 25. He considered 50 enough in a flock to obtain the greatest profit. The one great advantage in keeping them is in keeping up the fertility of our soil. Less time and labor are required for sheep than for any other farm stock.

In response to a question, Mr. Russell said that any of our pasture land that had an ordinary stone wall around it can easily be used as a sheep pasture. Posts set along the wall, with barbed wire strung along inside just along the top of the wall makes a very good enclosure.

The wool from sheep always finds a ready market at standard prices with the commission dealers of Boston, and mutton, if well fatted, will bring satisfactory prices. Here the speaker spoke of the price of early spring lambs, In the month of March from $9 to $13 can be obtained for a lamb weighing from 18 to 28 lbs. For years the speaker had averaged $8 or $9 for his lambs right through.

To secure the best prices for lambs they should be dropped in January or the first ten days in February. Ewes after dropping their lambs should be fed with shorts, ground oats, linseed oil meal, or something to keep a good flow of milk to fatten their lambs. There is little or no danger in overfeeding ewes that have just dropped their lambs. He shears his sheep in March with great success, but would not recommend the plan to others where extreme care cannot be taken of them.

Mr. B. P. Ware said he was induced to try the raising of sheep by the speaker, and he bought a hundred sheep, but the experiment did not prove a success. Other speakers were C. S. Emerton of Peabody, who keeps sheep, Mr. Marsh of Danvers, Mr. Phillips and Mr. Whitcomb, after which the meeting adjourned for dinner.

AFTERNOON SESSION.

In the afternoon the subject for discussion was "The Laws of Competition as Affecting Massachusetts Farmers," by Charles A. Mills, Esq., of Southborough.

Mr. Mills' address was an enlargement of the idea that the cheap and easy transportation have driven New England farmers out of the old established methods of agriculture, but the increased facilities, a growing population and new demands upon the farmer, open avenues for a successful business, and make his lot more desirable than that of his forefathers.

Competition, said the speaker, is the struggle to reach something someone else is striving for.

In farming the laws of competition are not as active as in many other things, but just as sure.

The early history of our farmers was a struggle for existance, but in the present advanced state of agricultural methods and improved machinery, one man can do the work that formerly required ten. The farmer now not only raises an ample supply for home needs, but has plenty to export. The increased facilities for transportation have reached such a point that the speaker had heard it said, that a bushel of corn could be brought to the farmer in New England, from the field in Illinois, for a smaller sum than the cost of grinding.

The New England farmer, with his increasing wants and comforts in living, cannot compete in those staples of the West, where land is fertile and cheap, and the primitive modes of living as compared with the East. Again the New England farmer is too easily diverted from the main object of his calling by thinking of the by-products. Thus

it has ceased to be profitable to raise beef in this section of the country, and the farmer whose object it is to produce milk, grumbles because he can get only a very low price for his cows from the butcher, when he should be studying to see how to make the cow give more milk.

The speaker quoted statistics to show how competition had effected the production of live stock in New England, he disagreed with Mr. Russell the speaker of the morning who had said that sheep could be profitably kept in New England. In Massachusetts between the years 1863 and 1885 the loss of mutton raised was eighty-nine per cent., and beef about in the same ratio.

With cereals the tendency is the same way, though they do not amount to so much. Their production has fallen off forty-seven per cent. in forty years.

But the speaker did not wish to be understood as declaiming on the decadence of Massachusetts farming. On the contrary, agriculture in this state is being brought into new and more desirable limits. He didn't believe there was a better place in the whole world than Massachusetts to-day. The farmer's present field is to supply products that are perishable. The demand is constantly increasing. The consumption of milk, for instance, has increased enormously. The speaker argued that it would pay better to keep cows for milk than to raise sheep. He believed in a cheap milk supply, and in increasing the capacity of the cow. Civil laws have been passed for the protection of producers and consumers. Now let the natural laws operate for cheap production.

A better quality of butter is demanded, and this our home farmers can supply. More fresh vegetables and fruit might be raised to good advantage, and very profitable increases are noted, particularly in regard to cranberries and strawberries. The demand for eggs and poultry is also constantly on the increase, and so is the production at good prices.

Competition means with the Massachusetts farmer a

wise choice in regard to the branches he shall pursue, and intelligent direction of his labors. It puts a premium upon energy, pluck and thrift. It makes the farmer a specialist, and puts the stamp of his individuality upon his product.

The 85th Institute, and sixth of the season, was held in Odd Fellows' Hall, No. Andover, Friday, March 4, 1892, the subject for the morning being "Fruits; the Best Varieties and the Best Methods of Cultivation," the speaker being Mr. J. H. Hale of South Glastonbury, Conn.

Mr. Hale is a practical fruit grower, and in company with his brother, owns one of the best, if not the best fruit farms in Connecticut. Mr. Hale was born on a New England farm, and necessity compelled him to stay there until he became of age, when as U. S. census agent in the last census, he had a chance to travel all over the United States, after which he returned to New England, where he was glad to make it his home, and considers it the most desirable place in the country for a young man to make his home. In his travels he has noticed that horticulture is drifting into specialties. Formerly Delaware and New Jersey were the peach-producing states, but extensive orchards are now being set in Georgia, Tennessee, Kentucky and Southern Missouri. Pears, peaches and grapes are being extensively planted in Colorado, apples in Missouri, and prunes in Oregon. California produces immense quantities of fruits which can be dried and shipped East.

Certain climatic conditions, however, enable New England to produce better fruit than can be grown anywhere else in the United States. Speaking of the apple, he said that he believed the difficulty with our New England farmers was that they didn't cultivate it on a sufficiently large scale.

Our apple trees are stimulated for a year or two, and then allowed to go back. There is not sufficient care taken of them to make them profitable. Letting pruning go back for a time, and then almost murdering the tree, and seldom if ever spraying them, did not inure to possible great pro-

fits. There is not much money in apples at 75 cents or $1 per barrel, but New England wants more apples and better apples, for which the people will pay a price that will make them profitable. In the way of small fruits there is a wonderful opening. He knew that sometimes, when the prices were low, as they often were with strawberries, it was discouraging, but that is with cheap berries. He himself had no trouble with good fruit. The danger of raising small fruits is the using of too much stable manure. He himself had done better with commercial fertilizers rich in potash and phosphoric acid. If there is a great use of stable manure we get a soft berry.

In his peach ventures he began about twenty years ago. New England is rather out of the peach belt—not below, but above it—but he had found by observation that on high elevations, exposed ground, he was apt to get more peaches than in the hollows and around the buildings. He kept stable manure away from the trees, but used potash, which made the tree grow more slowly, but harder wood, firmer and wonderfully productive. Winter killing is the one bad thing for peach raisers to face. He had found that in trimming for shape of his trees he sacrificed their fruit by cutting off here and there a bud. Now he trims for fruit instead of looks, and has the most outlandish looking set of trees to be found anywhere, but they all bear largely. Mr. Hale said "thirty-five acres in 1889 gave us $28,000 from our peach trees."

He advised to plant a few trees every year; make it a rule to do it, and choose only the hardiest. We cannot obtain hardly two crops in five years, but one in four years is practically sure, and with some varieties a crop every year, and when you get your fruit to market you will find something to learn there. Put your fruit in good, new, clean, white boxes, never use boxes for fruit of any kind after they are colored, and regular travellers on the road. In good, clean, white boxes the fruit will bring enough more to pay for the boxes.

After this a very interesting discussion began and kept up until time to adjourn for dinner.

AFTERNOON MEETING.

On re-assembling after dinner the Hon. J. J. H. Gregory of Marblehead gave a very interesting address on "Vegetables, and how to raise them."

He said at the outset that an intelligent presentation of his subject involved location, manuring and preparation of the soil. Whether a man was a market farmer or a market gardener depended upon his distance from market. In either case he must reach it at least once a day, and a market gardener must reach it twice a day to get his prices.

The market gardeners raise but bed stuff largely—lettuce, radishes, cucumbers, melons, spinach, anything that can be started under glass, whereas the market farmer raises pickles, cabbages, squashes, onions, with peas, sweet corn and most anything that will sell, and recognizing that it is the early bird that catches the worm, he would choose the early varieties. The first thing to be considered is the character of the soil and what crops are adapted to certain kinds of soil. For instance, for early crops we want early soil. All vines, peas, beans, want warm, early land. Cabbages and beets want cool land. The manuring of the soil depends on the character of the land. The first crop coming naturally is beans. Not much nitrogen is wanted for the pea or bean crop. Good manuring is required, but the nitrogen might be left out. Bone is a very good fertilizer for them. The manure does best harrowed in. He earnestly advocated working the land well.

Speaking of squashes, he said that a great mistake is that they must be raised in the midst of a great heap of manure. He furrowed out his 9x9 both ways; put in a forkful of manure and pressed it with his foot. Squash roots were wonderful things and exceedingly fine; the roots of a squash vine, it is estimated, will reach fifteen

miles. Plaster is best for squashes, but not air-slacked lime. There is no such thing as male and female squashes, but male and female blossoms. The male is the large, straight blossom coming directly up from the root, while the female blossom is smaller and comes along on the vine.

Speaking generally of manures he said he would spread broadcast with most crops and harrow in. If plants are manured too heavily they will run to vine too much and be less productive.

Mr. Gregory described the several kinds of peas and beans, and what kinds of plant food they require. For beets, he said a good deal of potash was required. If the farmer has any ashes he will find it an excellent fertilizer for that crop. Carrots want high and very liberal manuring. He would put on eight to ten cords to the acre. Tomatoes want good manuring, muriate of potash, and nitrate of soda is good for them. Corn is also one of the best early crops. It should be planted in drills. Put in six cords of good, fair manure and five hundred pounds of fertilizer.

The early cabbages should be started in hot beds. The secret of success is in getting those which had been hardened off. For manure he would use ashes in the fall, 100 bushels to the acre, and about eight cords of manure to the acre in the spring.

For potatoes, Mr. Gregory endorsed the French system of planting, making a deep furrow, then putting in fertilizer, placing over that a layer of earth, then dropping the potatoes and covering them over.

Onions are a great crop, but it is a make or break crop. Put in from ten to twelve cords of fish manure. He had used fifteen cords, ten cords good weight manure, well rotted down, that has more fish in it than any other elements would perhaps answer. What is wanted is six per cent. nitrogen, six per cent. potash, and six per cent. phosphoric acid. The farmer should build up his manure for each special crop by studying results; then begin to fight

the weeds before you can see them, said the speaker ; if you wait until you see them you are a little too late.

The closing indoor Institute was held in Abbot Hall, Marblehead, Friday, March 26, 1892. President Appleton occupied his usual place in the chair.

The Institute was the first one ever held in Marblehead, and during the morning, Mr. Gregory showed the visitors many places of interest and related such legends and reminiscences as were of interest to them.

The subject for the forenoon was "Utilization for Plant Food the Wastes of the Ocean" by Hon. J. J. H. Gregory.

Mr. Gregory commenced by considering the geological construction of the bed of the sea and the shores. The plant growth at the bottom of the sea, were the truth known, said the speaker, would be found to exceed that of the land. Mr. Gregory exhibited to the audience specimens of sea kelp, rockweed and other marine vegetation, redolent of the sea. Sea vegetation, said the speaker, requires plant food the same as land plants. In the ocean, as upon the land, the different forms of life are dependent upon each other. Thus the cod fish is found in abundance only where there is plenty of kelp. It is often remarked that the sewerage that empties into the ocean from our large cities is wasted. That is not so. It fertilizes marine plants, the strong currents carry it away and distribute it along the bed of the ocean. The speaker believed rockweed much more abundant now than formerly, on account of the sewerage. Sewerage might, perhaps, be used to better advantage on the land, but it is not wasted in the sea. Next we come to Fish ; leaving out all consideration as a food supply. Fish skins and heads are now used extensively in the manufacture of isinglass and glue. The skins of the seal and porpoise are used largely for leather. The speaker expressed his regret that Dog fish, which at certain seasons are very abundant, cannot be better utilized for fertilizer, they are so muscular that acids do not readily

work upon them, and the only way in which they can be used to advantage is by composting them with manures. He next spoke of Halibut chum. This consists of the head of the fish pressed dry into cakes. It is rich in phosphoric acid, and is worth $30 per ton by analysis. Fish skins and porgies were next considered. The skins are rich in phosphoric acid and so are fish bones. These fertilizers are excellent for onions, cabbages and peas, but not good for squashes, cucumbers and the like. He did not think much of mussel bed mud. By analysis its value is one third that of barn manure. In former days all fish wastes were thrown away and anyone could have them by calling for them, but that is all changed now, everything is utilized one way or another. Complaint is sometimes made that the continual application of fish wears out the land, but it wouldn't if farmers would make a complete fertilizer. In itself it is not well balanced, but needs more potash. Halibut chum is the best balanced. Kelp is rich in potash, a constituent in which the sea animals are deficient. Rockweed is richer than kelp, and weight for weight is twice as rich in nitrogen.

Farmers may smile at the idea of sand as a fertilizer. It is of the same constituency as our native rocks, rich in potash ; when mixed with dark rich soil the carbolic acid of the soil sets free the potash in the sand, and it becomes a valuable fertilizer. Salt has no value in itself, as a manure, but like plaster it sets free the plant foods in the soil. The black mud of the marshes is composed of decayed vegetable matter, the same as the prairies, except that it is salt.

Dinner was served by the woman's relief corps in Odd Fellows' Hall and in the afternoon, Prof. Wm. E. Brooks, of Amherst Agricultural College, spoke on the " Judicious Use of Manures."

Prof. Brooks had strung across the stage a series of tables illustrating experiments to which he referred. He gave the results of analysis of cellar manure from the well

fed cows at the Agricultural College, which is materially above the specimens found in the average barn cellar, of which he had examined many. Prof. Brooks believed in applying manure to the land fresh. Many elements of value in it are otherwise lost in the course of a year, the action of the frost, snow and rain on it in the field is beneficial. It should be spread as soon as hauled on to the ground and not left in piles during the winter. He believes it pays to use commercial fertilizers with manure, and did not believe it true that fertilizers ruin the land if their use is persisted in intelligently.

One ton of English hay contains $6 worth of plant food. One ton of Clover hay contains $9 worth of plant food. Fifty bushels of corn with stover contains $15 worth. One hundred bushels of potatoes contains $3 worth, but we have to use very much more than those values to obtain the crops named. As a rule only a very small per cent. of the plant food supplied is shown in the crops. Where does the surplus go to? That is the question. Here the speaker explained the charts that showed the results of his experiments. He said that fertilizers for corn should be far richer in potash than that generally used. Too much Superphosphates have been used.

Dry ground fish and muriate of potash make the best top dressing for grass land. Potash by all means is the best fertilizer for clover. Experiments with potatoes showed that potash increased the crops much more than phosphoric acid or nitrogen. Commercial fertilizers contain a much smaller percentage of potash than is needed. He was not prepared to give a formula for potatoes.

In answer to a question about scab potatoes, Prof. Brooks quoted Prof. Bonner of Colorado, as having decided as a result of experiments that the scab was the result of a parasite growth in the cells which formed the scab and spread.

For Oats with mixed grass and clover seeds, experiments seemed to indicate that it would pay to use a little nitrate of soda, but not phosphoric acid nor muriate of Potash.

He highly recommended clover as a fertilizer. Clover obtains its nitrogen from the air, and nitrogen costs more than any other ingredient in the fertilizer. The clover may be used to good advantage by plowing it in, but it is a better plan to feed it to the animals and apply it in the form of manure.

Nitrogen is soon lost after applying to the soil, but that is not the case with phosphoric acid and potash. Nitrogen should be fed out slowly and as it is needed.

In conclusion, he advised farmers to buy ingredients for mixing with commercial fertilizers, varying the proportions for different crops. For corn, use more potash, he preferring muriate of potash. For potatoes use more sulphate of potash. For grains use a little nitrate of soda, except on very rich land. For clover use potash. In applying fertilizers generally use phosphoric acid abundantly, but dole out nitrogen as needed.

A FIELD INSTITUTE

Was held at the Asylum Farm in Danvers, Tuesday, April 19th. There was not so large a display of Implements as is sometimes the case, but very creditable exhibits were shown by Henry Newhall & Co. of Danvers, and Whitcomb & Carter of Beverly. The interested spectators, of which there were many, saw the different Implements tested and could be their own judge of what kind suited their own individual preferences. The Asylum barn drew the attention of many interested farmers. It is a model structure and Dr. Charles W. Page, the superintendent, took good care to answer all the inquries made in regard to the different methods of feeding, watering the stock, etc., and the examination of the silos in the barn was another interesting feature for some.

The barn is light and airy, plastered wherever it is of any use to make it warm, but well ventilated so that the

air is pure and sweet all the time. The cows are nearly all grade Holsteins, and the barn will accommodate about 120 head. The cows are tied in comfortable stanchions that allow considerable scope for moving about, and are watered twice a day from shallow troughs in front of the stanchions, about 400 tons ensilage and 150 tons of hay are required to keep the stock at this farm. The piggery was another source of attraction, and the visitors bought quite a large number to be sent to their homes before leaving. Taken as a whole it was the most interesting field meeting the society has held for many years.

COMPARATIVE VALUE OF CROPS AS FOOD FOR CATTLE.

BY DR. CHAS. W. PAGE, SUPT. ASYLUM FARM, DANVERS.

Again your committee has to report, as in past years, that no one has presented a statement embodying his experience in testing the comparative value of different crops as food for cattle.

It appears that the farmers of Essex County do not study this question by practical tests, or they do not care to tabulate and make public the results they obtain.

If the first clause of this supposition is true, it is somewhat surprising, since a solution of the questions involved, which can be reached in no other way, is of great pecuniary interest to every farmer in the county. And besides, the gratuity at the disposal of the committee, although a handsome reward in this connection, represents but a fraction of the ultimate gain which each man may surely expect as the outcome of intelligent experiments in this line of progress.

Perhaps the second clause of the supposition conveys the truth in this case.

It is more than possible that the average farmer dreads the extra care and labor necessary to keep an accurate ac-

count of all his farm operations; and yet it is the pains taken, the careful thinking which such records promote, and the common sense, based upon such personal experience, which enable him to increase the productiveness of his farm and better his financial condition.

The sooner farmers adopt a system of records by the aid of which they can compare the money value of different crops and one year's results with those of another, the sooner will their farm work become more interesting and more profitable.

By efforts in this direction farmers can increase the dignity of their calling and raise it to a higher level in the scale of commercial enterprises.

Success in any business demands frequent readjustments, and careful auditing of accounts is absolutely essential. What business man would not, sooner or later, find himself a financial wreck if he wholly neglected his bookkeeping?

Manufacturing, commerce, and merchandizing are exceedingly sensitive to altered conditions of transportation, labor-saving devices, competition, tariff, etc., and well posted managers promptly relinquish unprofitable methods, grasp new lines of activity, and project new ventures.

Agricultural methods are less flexible, less easily diverted from old fashioned ways for the reason, principally, that farmers do not keep day book and ledger accounts with their farming operations.

Because the laws of nature with regard to vegetation are undeviating, New England farmers have relied too much upon hereditary methods of farm management, and have concluded too readily that farming cannot pay, because their own methods have been disappointing. And yet, if farmers will adapt their operations to the enormous changes which farming as well as business in general, has undergone within forty years, they will find there is no limit to the wealth which can be taken from mother earth in old Massachusetts.

New and intelligent methods must be put into farm work. Each farmer should test new plans and promising expe-

dients, until he discovers which ones are suited to his soil, his markets, or his tastes.

It is unnecessary to commence on a broad scale. Let each man select the experiments which interest him most, which give greatest promise to meet his wants, and proceeding cautiously, record every step in the operation.

The report of your committee for 1891 was an argument in favor of corn as the most profitable crop for feeding cattle.

As the committee for 1892 entertain the same views concerning the value of the corn crop, and would not intentionally thrash old straw — and especially straw which has been so well thrashed by Mr. Butler — it is thought best to supplement last year's report with an account of a practical experiment in feeding milch cows with corn ensilage at the Danvers Lunatic Hospital farm.

650 quarts of milk are required each day for use in the hospital. Previous to 1892, a part only of this necessary quantity of milk had been produced on the hospital farm. The amount purchased from outside parties for the six years immediately preceeding, cost the hospital more than $20,000.00.

About one year ago a new cow stable was erected, and since its completion, forty additional cows have been purchased for the herd.

Upon a farm which had previously supplied barely enough hay for eleven horses and sixty cattle, active measures had to be adopted to provide for the present stock which consists of thirteen horses and 120 cattle, including young stock.

In May, 1891, seventeen acres were planted with ensilage corn. From these fields 440 tons were cut and stored in the following September.

With that ensilage the stock has been easily carried to the present time; all the milk used in the hospital since January, 1892, and nearly all that has been required since October 1st, 1891, has been made on the farm, while the cost of grain and meal consumed by the stock for the year

was less than the average yearly cost for the preceding six years.

The system of feeding was as follows, viz. : Twice a day throughout the year the cows were fed three quarts of the following mixture, viz. : shorts 150 lbs., corn meal 100 lbs., cotton seed meal 50 lbs.

Through the summer of 1891 the whole herd ran in the pasture. In August, each cow was given about four lbs. of hay once a day. From the 20th of October, 1891, all the milch cows have been wholly fed in the barn. At first they were given about six lbs. of hay twice a day, and green, —second crop, —grass once a day.

On the 11th day of November, 1891, a silo was opened, and for more than six months the cows had the following for a steady diet, viz. : fifteen lbs. ensilage night and morning, with about five lbs. hay at noon. For several months, beginning in December, the stock received one-half of a cart load of mangel wurzels, or turnips. In this way 72 tons of mangels and 300 bushels of turnips were fed.

There was no deviation from the above bill of fare until the 20th of May, when green winter rye was substituted for ensilage at night. In less than a month the rye was used up, and as there was no early clover on the farm, green grass was fed at night.

About the middle of July the supply of ensilage was exhausted. It had kept perfectly, undergoing no deterioration during the warm weather. The last portions were just as sweet as those fed earlier, and were just as greedily eaten by the cows.

For a month green oats, with an occasional change to freshly cut grass, was given night and morning. After that for one week new hay was given three times a day.

After the 25th of August, second crop clover was fed night and morning for five or six weeks, and subsequently pease and barley, with an occasional load of second crop grass.

In all, about 175 tons of green fodder has been given since the ensilage was gone.

The cows have had dry hay daily at noon, through the year. They have been watered twice a day in the stable, which is well ventilated, but warm. At no time last winter did the temperature fall below 40 degrees in the cow stable.

The health of the herd has been remarkably good, and the general condition, flesh, looks, &c., has been excellent.

At every milking the quantity given by each cow was weighed separately and recorded on the daily milk chart. At the end of the month the whole amount and the daily average given by each cow was figured out, and reduced to quarts by allowing 2.15 lbs. to the quart. These monthly summaries have been grouped to cover the hospital year, and in that table the yearly product of each cow and her daily average for the whole year, 365 days, are given.

The daily record demonstrates a number of interesting points, a few of which may be stated here.

It shows that the quantity of milk is reduced whenever cows are subjected to change or excitement.

In very cold weather they were turned into the yards about once a week only, and each time they went out, there was an immediate shrinking of several cows' milk, for a day or two following. The most abundant flow of milk came when the cows were fed on new dry hay three times a day. This hay was cut in June from turf upon which a commercial lawn fertilizer had been spread the season before, and contained considerable red and white clover.

Aside from this exceptional instance, there was an immediate shrinking of milk whenever the daily rations were changed, but usually the loss was made up within a few days.

With none of the green stuff, winter rye, oats, pease and barley, green grass, and green clover, was the milk more abundant, or better in quality, so far as practical use could determine, than when the ensilage was being fed.

In our experience, there are many points of advantage in favor of corn ensilage as food for milch cows; such as the low cost per ton; the certainty with which advance esti-

A— First cow bearing the No.

B, etc.,—Changes.

DANVERS HOSPITAL FARM.

AMOUNT OF MILK PRODUCED BY FORTY-FIVE COWS FROM OCTOBER 1, 1891 TO SEPTEMBER 30, 1892.

				OCTOBER.		NOVEMBER.		DECEMBER.		JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.		JULY.		AUGUST.		SEPTEMBER.		YEAR.	
NO.	ORIGINAL COST.	BLOOD.	AGE.	AMOUNT.	QTS. DAILY.	AMOUNT.	QTS. DAILY.	AMOUNT.	QTS. DAILY.	AMOUNT.	QTS. DAILY.	AMOUNT.	QTS. DAILY.	AMOUNT.	QTS. DAILY.	AMOUNT.	QTS. DAILY.	AMOUNT.	QTS. DAILY.	AMOUNT.	QTS. DAILY.	AMOUNT.	QTS. DAILY.	AMOUNT.	QTS. DAILY.	AMOUNT.	QTS. DAILY.	TOTAL QTS.	AVERAGE 365 DAYS.
1A-B	$50	Hereford	10 yrs.	195 75	6 31	53 80	1 79	...	...	...	...	...	...	181.74	5 86	356 31	11 88	395 87	12 77	302.03	10 06	232 32	7 49	B	B			1717 82	4 70
2A	50	Grade	10 "	190.52	6 14	65 26	2 17	...	..	224.62	7 25	403 60	13 91	368.89	11 90	321 86	10 73	322 96	10 42	298 43	9.95	275 23	8 88	247 26	7 97	185 58	6 18	2904 21	7 95
3A	65	Ayrshire	10 "	250 66	8 08	220 95	7 36	136 30	4 40	28.60	92	...	...	...	..	273.92	9.13	428 60	13 83	365 75	12 19	335 52	10 82	351 91	11 35	307 00	10 23	2609 21	7 39
4A	60	Holstein	5 "	416 01	13 42	354 74	11 82	318 83	10 28	292.87	9 44	289 53	9 98	288 83	9 32	268 54	8.95	275 11	8 87	258 26	8 61	260 44	8 40	243 60	7 86	213 98	7 13	3480 74	9 53
5A-B								B																					
6A																													
7A	50	Holstein	4 "	259 79	8 38	259 24	8 64	230 43	7 43	201 75	6.51	112.38	3 87	...	...	...	...	...	...	403 43	13 45	478 69	15 44	465 23	15 00	416 39	13 88	2827 33	7.74
8A	Raised	Ayrshire	11 "	242 59	7 82	245 78	8 19	81 45	2 63	239 41	7 72	239 35	8 22	294.04	9 48	282 29	9 41	281 04	9 06	280 11	9 34	243 14	7 84	244 42	7 88	222 44	7 41	2896 06	7 93
9A	50	Holstein	5 "	150 49	4 85	56 65	1.89	...	...	...	...	139 21	4.45	492 41	15.88	468 02	15 60	439 29	14 04	409 42	13 65	363 23	11 72	357 84	11 54	320 55	10 68	3197 11	8 75
10A	50	Holstein	4 "	250 55	8 08	252 23	8 41	209 71	6 76	183 00	5.90	41 97	1.44	227 26	7 33	247.44	8.25	221 63	7 15	221 04	7 37	203 26	6 56	207 93	6 71	199 16	6 63	2465 18	6 75
11A	50	Holstein	4 "	289 06	9.32	267 49	8 91	277.06	8 93	260.87	8 41	240 14	8 28	163 46	5 27	146 16	4 87	...	...	..	..	...	.			...	...	1644 24	4 50
12A	Raised	Ayrshire	6 "	426 51	13 76	378 72	12 62	358 54	11.56	353.19	11 39	311.71	10.75	291 57	9 41	272 24	9 07	252 21	8 13	229 09	7 63	211 63	6 83	216 97	6 99	174 07	5 80	3476 45	9 53
13A	30	S-Horn	3 "	235.40	7 59	231 51	7.72	200 60	6 47	183 51	5 92	181 25	6.25	187 56	6 05	177 21	5.91	176 45	5 69	124 42	4 15	...	...	...	...	...	...	1697 91	4 65
14A	50	Holstein	4 "	294 06	9.48	284 76	9 49	272 06	[illegible].77	269 47	8 69	260 28	[illegible] 97	262 91	8 48	208 46	6 95	168 54	5 43	...	...	...	...	...	...	270 52	9 02	2291 06	6 27
15A	45	Ayrshire	8 "	...	...	...	...	..	..	...	...	279 07	9.62	454 12	14.65	386 04	12 87	376 45	12 14	360 37	12 01	356 86	11 51	384 76	12 41	369 86	12 33	2967 53	8 13
16A	45	Devon	8 "	361 83	11 67	377.72	12 59	338 46	10 92	346 36	11.17	346 39	11.94	370 23	11 94	347 79	11 59	353 08	11 39	211 33	7 04	259 04	8 35	221 04	7 13	116 28	3 87	3649 55	10 00
17A	50	Holstein	4 "	335 26	10 81	326.83	10 89	296 33	9 56	287.64	9 28	282 12	9 72	318.43	10 27	288 60	9 62	271 04	8 74	204 01	6 80	41 04	1 32	21 39	69	390 95	13 03	3063 64	8 39
18A	40	Holstein	4 "	173 89	5 61	137.96	4 60	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	B	.		..	311 85	85
19A	Raised	Holstein	5 "	188 02	6 06	211.71	7 05	134.85	4 35	...	...	...	...	597 00	19 26	625 72	20 86	562 67	18 15	475 11	15 83	446 54	14.40	412 67	13 31	395 46	13 18	4049 75	11 09
20A	50	Holstein	4 "	297 96	9 61	310.14	10 34	295 26	9.52	286 56	9.24	257.64	8 88	284.71	9.18	280 49	9 35	285 96	9 22	251 04	[illegible].37	145.23	4.68	...	...	...	...	2694 99	7 38
21A-B								B																					
22A	50	Holstein	4 "	319.15	10 29	242 87	8 10	226 22	7.30	269 94	[illegible].71	274 94	9.48	283.02	9 13	273 36	9 11	271 28	8 75	267 47	8 91	228 89	7 38	230 93	7 45	128 60	4 28	3016 70	8 26
23A	40	Hereford	4 "	214 21	6.91	206 01	6 87	196 36	6.33	161.05	5 20	...	...	100 00	3 23	384 59	12 82	348 89	11 25	303 31	10 11	290 81	9 38	264 07	8 52	235 37	7 84	2704 67	7.41
24A	60	Holstein	14 "	300 00	9.67	279 80	9 33	288 28	9 29	211.10	6 81	266 33	9.18	318 02	10 26	316 36	10 54	292 38	9.43	259 82	8 66	235 64	7 60	258 77	8 35	235 20	84	3261 70	8 93
25A	50	Holstein	4 "	179 15	5 77	179.88	6 00	169 67	5 47	154 42	4 98	142 93	4 58	135 09	4 37	123 31	4 11	73 05	2.36	...	...	...	...	...	...	41 39	1 38	1188 89	3 25
26A-B								B																					
27A	50	Holstein	4 "	332 14	10.71	340 98	11 37	314.24	10 13	288 78	9 31	245.03	8.45	259.94	8 38	250.99	8 36	236 80	7 64	186 51	6 22	25 81	83	...	...	111 86	3 73	2593 08	7.10
28A	50	Holstein	4 "	329 24	10.62	285 72	9 52	277 32	8.94	245 37	7 91	239 88	8.27	241.25	7 78	199.27	6.64	115 44	3 72	...	...	...	...	135 29	4 36	397 67	13.25	2466 45	6 75
29A	63	Holstein	10 "	290 37	9 37	289 88	9 66	301 48	9 72	298.37	9 62	291 33	10 04	291 45	9 40	189.53	6 32	...	...	...	...	...	...	353 55	11 42	335 17	11 17	2641 53	7.23
30A	50	Holstein	4 "	143 13	4 62	258 25	8 61	210.26	6 78	207.88	6.70	234 27	8 08	259.59	8 37	238 02	7 93	226.63	7 31	164 44	5.48	...	...	...	...	244 88	8.16	2187 35	5 99
31A B								B																					
32A	55	Durham	7 "	143 54	4 63	156 83	5.23	175 14	5 65	382 44	12.33	364 65	12.57	384.42	12.40	352.53	11.75	277 56	8 95	200 93	6 69	193 95	6 25	194 88	6 28	217 62	7 25	3044 49	8 34
33A	35	Jersey	7 "	27 32	88	...	...	...	...	...	...	75 46	2.60	332.09	10 71	333 26	11.11	327 85	10 57	300 14	10 00	282 44	9 11	278 14	8 97	272 93	9 09	2229.63	6 11
34A-B								B																					
35A																													
36A B						B																							
37A	45	Jersey	5 "	251 88	8 12	235.29	7.84	213 66	6 89	203.08	6.55	188 54	6.50	196.60	6.34	166 51	5 55	102.56	3 31	...		...	...	272 09	8 78	272.21	9.07	2102 42	5 76
38A																													
39A	45	Holstein	7 "	...	...	...	...	...	...	258.75	8 35	331 54	11.43	328.60	10.60	306.74	10.22	301 86	9 74	282.27	9 41	289 59	9 34	287.90	9 29	218.55	7.28	2605 80	7 13
40A																													
41A																													
42A-B								B																					
43A																													
44A																													
45A																													
46A	55	Hereford	6 "	125 55	4 05	157 67	5 25	72 06	2 32	...	...	...	...	...	...	...	...	...	...	...	...	.	...	...	...	80 93	2.70	436 21	1 19
47A	55	Durham	8 "	234 85	7 57	164 79	5.49	45.43	1.46	...	...	...	...	160 98	5.19	470 23	15.67	292.04	9 44	358 37	11 94	350 06	11 29	372 32	12.01	345 09	11 50	2794 76	7 65
48A																													
49A																													
50A	55	Holstein	6 "	383 54	12 37	394 62	13.15	367 90	11.87	316.56	10.21	312.26	10.77	334 33	11 14	374.36	12 48	371 80	11 99	341 07	11.37	330.58	10 66	319.76	10 31	54 24	1 81	3901 02	10 68
51A																													
52A																													
53A	35	Thor-J'rs'y	7 "	132 29	4 26	144.79	4 82	123 60	3 99	...	...	71.28	2.46	307.32	9.91	295 11	9 83	296 86	9 57	279 77	9.32	264 01	8 52	260 00	8 39	241 28	8 04	2416 31	6 62
54A	50	Holstein	5 "	255 23	8 23	174 79	5 82	...	...	...	...	...	...	179.91	5.80	596.16	19 87	582 61	18 79	522 58	17 42	475 46	15 33	445 35	14 36	395 93	13 19	3628 02	9 93
55A	50	Holstein	5 "	235 08	7.58	217 67	7 25	167 64	5 41	34 74	1 12	...	...	369 12	11.91	595.32	19 84	555 35	17.91	408 69	13 62	420 00	13 55	454 88	14 67	409 50	13 65	3867 99	10.59
56A	50	Holstein	5 "	279 33	9 01	288 48	9 62	272 84	8 80	223 83	7.22	148.98	5 13	...	...	171 28	5 71	245 20	7 9	258 02	8 60	230 69	7 44	241 97	7 80	222 09	7 40	2582 71	7 07
57A	50	Holstein	5 "	260 40	8 40	271 63	9 05	216 53	6 98	77 73	2 51	...	...	...	...	495.76	16 52	562 44	18 14	479 07	15.80	467 03	15 06	463.84	14 96	436 91	14 56	3731 34	10 22
58A	50	Holstein	5 "	.	...	...		62 96	2.03	331 71	10.70	293 11	10 11	272.41	8 79	239 76	7 99	233 26	7 52	203 60	6 79	179 24	5 78	190 69	6 15		..	2006 74	5 49
59A	50	Holstein	5 "		...	...	..	...	...	54 27	1 75	372.93	12 86	441 86	14 25	407 32	13 58	421 45	13 59	387 21	12 90	373 84	12 06	352 67	11 38	345 01	11 52	3157 16	8 65
60A	50	Holstein	5 "	265 49	8 56	280 08	9 33	277 99	8 96	231.30	7 46	169 04	5.83	...	...	...	...	508 26	16 39	490 29	16 34	463 20	14 94	454 88	14 67	391 77	13 06	3532 30	9 67
61A	50	Holstein	5 "	258 89	8 35	267 23	8 91	220 43	7 11	69 27	2.23	..	...	187 24	6 04	559.48	18 65	530 96	17 13	467 61	15 59	449 36	14.49	448 60	14 47	410 75	13 69	3869 8[illegible]	10 60
62A	50	Holstein	5 "	285 66	9 21	289 06	9.63	276 39	8 91	245 14	7.91	208 89	7.20	68 95	2 22	...	...	...	...	...	...	634 79	20 48	651 16	21.00	589 74	19 60	3249 78	8 90
63A	Raised	Ayrshire	3 "																										
64A																													
65A																													
66A																													
67A	50	Holstein	5 "	...	...	...	...	...	...	249.36	8.04	372 00	12.83	425 35	13.72	376 04	12.53	385 23	12 43	394 09	13 13	393 81	12 70	379 18	12 23	347 18	11 57	3322 30	9 10
68A	50	Holstein	5 "	...	...	...	...	...	...	...	...	...	...	383 54	12.37	451 28	15.04	348 84	11 25	370.58	12 35	342 61	11.05	337.56	10 89	310 84	10 36	2545 25	6 97
69A																													
70A																													
				9804 79	8 11	9161 81	8 03	7626 28	7 23	7672 94	7.28	7978.12	8.32	11044 24	9.38	13117.66	10 93	12720 10	10.51	11319.68	10.47	10773.98	9.93	11023 90	10.16	10875 55	9 29	123,119 05	

Total quarts for year, 123,119.05. Daily Average for year, 337.31 quarts. Daily average per cow for year, 9.20 quarts. Average number of cows milked daily for year, 36.66.

mates can be made as to the amount required, and the number of acres to be planted; the facility with which a large quantity can be grown and harvested; the limited space required for housing; the ease with which exact feeding can be regulated, and the relish with which it is eaten by the stock for long periods.

Our tests of corn ensilage, which, if properly secured and stored, will never disappoint reasonable expectations, go to support Mr. Butler's conclusion that "Corn is king, even in Essex County."

The record of 45 cows, all that were on the farm for the whole year, is herewith respectfully submitted, to be disposed of as deemed best by the society. The daily record for the whole herd made a still better showing, since quite a number of good cows have been purchased within the year, and some were disposed of when the daily yield became low. This record, with report on ensilage, &c., is not offered in competition for the prize offered by the society, because of so many changes in the herd, and because the crop report did not cover points enough to place the experiment on a scientific basis.

In classifying according to blood, the prevailing strain is given. Only 4 or 5 of the whole number are pure bred animals, but with pure blood, registered, Holstein and Ayrshire bulls in our stock, and our complete milk records for each cow, we hope for success in breeding a herd of extra good milch cows in the future.

IN MEMORIAM.

In obtaining the names of members of the society deceased, a list of members was sent to the Trustee in each town and city for revision, requesting date of death and age of each member deceased, with brief notice of each in printing or writing, from which and from others, the following has been compiled by your committee: —

Moses B. Abbott, of Andover, died December 30, 1891, aged 49 years and 25 days. He was a soldier in the late war. He was a very genial companion and a good neighbor, a good farmer and an expert in raising good vegetables, for which he found a ready market.

George F. Mason, died in Andover, May 5, 1892, aged 52 years and 7 months. He was a thrifty farmer, and was a frequent exhibitor at the annual Fairs.

Branch G. Gutterson, of Andover, died suddenly at his home, January 11, 1892, aged 72 years and 6 months. He was born in Truro, N. S. He came to Methuen, Mass., and engaged in the shoe business. A few years ago he removed to Andover, and engaged in farming, which he followed until his death. He was a very worthy and upright citizen.

Joseph S. Holt, died in Andover, November 4, 1892, aged 84 years and 8 months. Mr. Holt was one of the oldest members of the Society, always taking great interest in the transactions of the Society. When a young man he was engaged in farming, in which he took great pleasure, experimenting with different crops. Owing to poor health he removed to New York City, and was in the employ of the American Bible Society for more than forty years. A few years since he returned to spend his remaining years at his old home in Andover, which he so much loved.

Jonathan H. Osborne, of Amesbury, who became a member of this Society in 1886, died April 1st, 1890, aged 59 years. He was born in Weare, N. H., but in early life he came to Amesbury. Although the greater part of his active life was engaged in carpentering and in the carriage industry, he ever looked forward to the time when agriculture should claim his whole attention. That time had arrived. He was just ready to enjoy the fruits of his labor, when he was stricken with la grippe, which caused his

death. He had served the town several terms as selectman, was a charter member of Amesbury Grange and its first Master, and was also President of the Amesbury and Salisbury Agricultural Society.

Oliver P. Killam, of Boxford, died April 30, 1892. He was born in Boxford, August 29, 1819, and has always made his home in that town. Mr. Killam was a man highly respected by his neighbors and townspeople, as a straightforward, plain, practical man. He was of the true type of the best New England citizenship. He was for several years Selectmen of Boxford, a member of the Legislature, and filled every office of responsibility and trust which needed sound judgment, to the entire satisfaction of his townspeople. For many years he was a member of this Society, and for several years was one of the Trustees, in which he took a great interest, and many premiums have been awarded him for the excellent products of his farm. His life was characterized by good works, and many in the community will remember him as one who gave modestly and generously to any worthy cause.

Samuel Longfellow, died in Groveland, June 3, 1892. He was born on Newbury Highlands in 1808, and bought his farm in this town in 1869. Mr. Longfellow was a successful farmer, making it his life work. He was the originator of the Longfellow corn, now so widely known, and has been a member of this Society for many years, interested in all of its work, and always ready to answer to his name when assigned to any committee, which was often, and it was always a pleasure to him to attend the Society's Institutes.

Zenas C. Wardwell, of Groveland, died October 10, 1892, aged 60 years. He was born in Maine, and came to Groveland when a young man, and has been engaged in

farming and the manufacture of shoes. He was a member of this Society about 30 years. He has represented his town in the Legislature and been State Senator for two years; also filled the office of Selectman and School Committee for several years.

Eldred S. Parker, of Groveland, died Nov. 6, 1892, aged 72 years. Mr. Parker was a life-long resident, and died in the same house in which he was born. Always made farming his business, and was one of the oldest members of this Society, formerly being a Trustee.

Mrs. Lucy J. Lefavour, of Danvers, died December 17, 1891. She was the widow of John Lefavour. She became a member of the Society in 1876, having taken a premium on butter in that year.

Elnathan Dodge, of Danvers, died January 7, 1892, aged 69 years. He became a member of the Society in 1850, from Beverly; that part of Danvers being a part of Beverly at the time. He was a farmer and carried on a large farm. He left a widow and two sons.

Walter S. Merrill, of Danvers, died February 9, 1892, aged 51 years, leaving a widow and two sons. He was a son of Levi Merrill, and succeeded his father in the drug business, which he carried on about 16 years. He became a member of the Society in 1874.

Ansel W. Putnam, of Danvers, died January 30, 1892, aged 70 years, 11 months, leaving a widow. When a young man he lived in Lexington, Boston, and 14 years in California. After his return he made his home on the old farm where Gen. Israel Putnam was born. He was a successful grower of small fruits, and very thorough in his methods. He became a member of the Society in 1872, and took an active interest in it, serving on many committees, and writing reports.

Edward Hutchinson, of Danvers, died June 21, 1892, aged 58 years, 9 months, leaving a son and daughter. He became a member of the Society in 1875. He was president of the E. & A. Mudge Shoe Co., and previously a member of the firm of E. & A. Mudge & Co. He was very active in the affairs of the First Church, Danvers Centre.

Francis Marsh, of Danvers, died September 24, 1892, aged about 54 years. He became a member of the Society in 1872, in Peabody, where most of his life was passed in farming. His father was James Marsh. He left a widow, three sons and a daughter.

Mr. Daniel Carlton, of North Andover, died Jan. 2, 1891, aged 92 years. He was born at the Carlton homestead, where he had spent the most of a long and useful life. Years ago he was miller at the ancient grist mill then located where the Davis & Furber Machine Co.'s plant now prospers. As a farmer — the pursuit he followed the greater part of his life—he was progressive and successful. He had been a member of the Legislature; he was selectman of the town for many years, both before and after it was divided from Andover. He was honest, independent and faithful in the discharge of every duty, and in his death the town loses one of its most respected citizens, and this society one of its oldest members, and formerly a trustee, and a man who always took an active interest in its welfare.

Elizabeth P. Stiles, wife of Farnham Stiles, of Middleton, passed to the higher life, Nov. 16, 1891, aged 76 years and 6 months. She had been a member of the Essex Agricultural Society many years, had received premiums and diploma of the society, for the best butter presented at their fairs. She was respected and beloved by all who knew her.

Calvin Rogers, who died June 15, 1889, was an honest

man, a good citizen, a methodical farmer, and interested in all matters pertaining thereto. One of the founders of the West Newbury Farmers' Club in 1856, he was devoted to its welfare, and for several years its president. In 1860 he was representative in the State Legislature.

Amos Poore died July 28, 1889. Like all intelligent farmers in the town, he was interested in the work of the West Newbury Farmers' Club, as in that of the County Society. He was enthusiastic in military matters, and at one time captain of a company in Major Poore's Battalion of Rifles.

Thomas G. Ordway, who died Jan. 25, 1890, was one of the most progressive, enterprising and successful farmers, a man who, while helping himself, was willing and pleased to extend a helping hand to others. He died full of years, holding the respect of all who knew him.

Enoch D. Carr died Nov. 26, 1891. Although inheriting a large farm, he was not particularly identified with farming, his attention being mostly given to the business of a butcher, in which he was successful, and he could be relied on to give good weight, sixteen ounces to the pound every time.

Daniel P. Nelson died Dec. 1, 1891. He was a lifelong and successful farmer. For more than twenty years he was the efficient and humane manager of the town farm and almshouse, giving entire satisfaction to the inmates and authorities.

Francis R. Edwards, of Wenham, died Aug. 8, 1891, aged 78 years, 8 months, 2 days. He was a whole-souled, generous farmer, of large physique and noble heart; slow of motion, honest and firm in every act. His large farm, upon which he was born and where he lived and died — at peace with all the world — he inherited from his father. It was a part of a large tract formerly owned by his ances-

tors, who were among the earliest settlers in the vicinity ; these broad and fertile acres, with their fertility unimpaired he has left to his children.

George W. Parsons, of Wenham, died Jan. 22, 1892, aged 62 years, 9 months, 24 days. He lived respected and died regretted by his neighbors. He was born at Gloucester; his ancestors had long lived on Cape Ann. He moved to Wenham when quite young, and early learned shoemaking, but in later years was engaged in the fish trade.

Charles W. Adams, of Newbury, died Feb. 7, 1892, aged 75 years. By his death the society loses a member who always took an interest in agriculture. He was a farmer of the old school, who thought a farm was not complete without a good yoke of oxen. He lived on the farm where he was born until within two years of his death. He was well-known and respected by all.

Mr. George A. Randall died March 30, 1892, aged 64 years. He was one of the most successful farmers, and one of the largest onion growers in Essex County ; a man of shrewd business qualities, his judgment was excellent, and by his death the society loses an honored member, the town a good citizen, and his neighbors a good neighbor. He was selectman of Newbury for a number of years.

Mr. James A. Hutchinson, of Middleton, passed away July 3, 1892, aged 51 years. He was a man of integrity—firm in his convictions of right. He was interested in political affairs, and, in fact, all those measures pertaining to the welfare of mankind, which made him a valued citizen.

Dea. William A. Phelps, of Middleton, passed to the spirit life, October 3, 1891, aged 74 years. He was a carpenter by trade, but interested in agricultural pursuits and in all reformatory movements which are intended to

bless mankind. He assumed no borrowed appearances, but *was* indeed what he appeared to be, full of truth, candor and humanity, which made him highly esteemed by all.

Daniel Brickett, of Haverhill, died February 19, 1892, aged 67 years. He was a native of Haverhill.

Benjamin E. Emery, of Haverhill, died October 31, 1891, aged 93 years 6 months. Born in Atkinson, N. H.

Samuel Fellows, of Haverhill, died May 25, 1892, aged 81 years 8 months. A native of Sandown, N. H.

Albert C. Heath, of Haverhill, died May 18, 1892, aged 78 years 9 months. A native of Newburyport.

Thomas H. West, of Haverhill, died April 24, 1892, aged 80 years 11 months. A native of Boston.

Mr. Thomas K. Leach, of Topsfield, died June 2, 1892. By the death of Mr. Leach the Society loses one of its oldest and most active members, and the town one of its most honored citizens. He was a constant attendent at all the meetings held by the Society, and had served as Trustee and Vice-President.

Mr. Daniel S. Goss, of Rockport, after a few weeks' illness of pneumonia, died at his home in Rockport, April 1, 1892, aged 64 years. Mr. Goss was a good citizen, a good neighbor and a good and successful farmer and market gardener. He has long been a member of the Essex County Agricultural Society.

Mr. James Manning, of Rockport, died from a shock of paralysis, March 26, 1892, at the age of 86 years and 3 months. He was a member of Granite Lodge of Odd Fellows over 39 years, and has filled many responsible positions in the order. He was also a man who took great in-

terest in public affairs, and has held several important offices of trust in the town of Rockport. He was for several years a member of the Essex County Agricultural Society.

Samuel Swett, of Peabody, was born in Tuftenboro, N. H., Sept. 18, 1818, died May 20th, 1892, aged 73 years and 8 months. Mr. Swett left the paternal homestead in early life, came to Massachusetts, sought and obtained service among farmers. After locating in Peabody he became acquainted with and married a daughter of the late John Bagley, who now survives him. Mr. Swett has rented and worked several farms, viz : — The Gardner and Blaney farms in Peabody, and the Ephraim Brown farm on Marblehead Neck, now that beautiful summer resort. For several years he was Superintendent of the Town Farm in Peabody. He also served the town upon the board of Overseers of the Poor. Mr. Swett was a model farmer, always keeping ahead of his work; never allowing the weeds to get the better of him. He was a man of decidedly pronounced opinions in agriculture, politics, and religion. A kind and devoted husband, an indulgent parent, a true and genial friend.

M. G. Clement, of Merrimac, died June 15, 1891, aged 67 years 5 months. Mr. Clement was a member of the board of Selectmen, having been elected in March, 1890, and re-elected last spring. He has been a successful carriage builder, and has been for 25 years interested in the various businesses that have been carried on in the felt boot factory building. He was the treasurer of the old axle company, and was a director in the manufactures which succeeded this business, on the premises. He was interested in the old Merino shoe business and also in the Bay State Felt Boot and Shoe Company. He has always taken an active interest in public affairs. He was an employer whom all his workmen respected and loved : a man

of genial attributes, and always willing to assist in any work that had for its object the advancement of the town's prosperity.

William Chase, of Merrimac, died October 14, 1891, aged 74 years. Mr. Chase was one of our oldest and most esteemed residents and has always been active in the municipal and social affairs of the town. He has been a member of the school board for three years, and always took a decided stand on educational matters. He espoused the cause of the Republican party and was prominent in the work: he represented the town in the Legislature, and has been at times quite prominent in local politics. In town affairs Mr. Chase was always interested in everything tending to our material prosperity. Before the division of the town of Amesbury he was a member of the board of Selectmen in the old town.

David M. Tewksbury, of Merrimac, died October 26, 1891, aged 74 years. He was a justice of the peace for many years, and was an old resident of this town, and had been engaged in farming and also in the ice business. Before the division of the town of Amesbury he took an active interest in town affairs, and for several years was one of the Selectmen. He was particularly active during the first years of the war in filling the town's quota of soldiers. Lately he has not shown so much interest in town matters.

Hon. Nathaniel A. Horton, of Salem, died December 14, 1891, aged 61 years, after a brief illness of only seven days. He had been a member of this Society for many years, and always took an active interest in its welfare.

Mr. Horton was one of Salem's most respected citizens and at the time of his death was senior editor of the Salem Gazette and Essex County Mercury. Hon. Caleb Foote, his life-long business partner very aptly says of him:

" His self-possession, clear and resonant voice, and pungent humor, gave him calls for a speech (at all public social meetings), which was always sure to be followed with applause, while his logical mastery of the subjects which he discussed in legislative bodies, always gave him a large measure of influence and popularity which would probably have sent him to Congress if he could have consented to encourage the plans which were proposed to him to that effect.

In public life he possessed peculiar qualifications ; great readiness and pungency with either speech or pen—a sharp, inquiring and logical mind, entire self-possession, a clear and incisive voice, and ready utterance : and in the legislative bodies of which he was a member, he had a larger than common share of influence. In social life he was hearty, frank, genial, and universally popular. Many hearts will be grieved at his departure, which, although at the ripe age of over threescore years, still appears untimely.

In his editorial and business relations he was upright and downright. No temptation of gain was sufficient to induce him to waver from the line of strict uprightnesss and fair dealing ; and what he consistently yielded to others he expected to have granted to the interests which he represented. He engaged in no delusion, trickery or false pretences, and never intentionally went back from any engagement, bargain, or promise which he had made. His sense of duty to the public as a conservator of morals was in constant exercise, and he earnestly desired to publish no sentence which he would wish to blot ; and he was able to attain in this matter a great degree of success. Knowing the sincerity and earnestness of his efforts in this and in other worthy respects, it is a satisfaction to me to indite these few words of remembrance."

Dr. GILBERT L. STREETER, TREAS., IN ACCOUNT WITH THE ESSEX AG'L SOCIETY. Cr.

1891-92.		1891-92.	
Nov. 1. To Balance of previous account,	$57 81	By Amt. of premiums and gratuities awarded by the Trustees,	$1 983 25
Bank Dividends for October,	342 70	Rent paid to the Salem Athenæum,	25 00
State Bounty,	600 00	Expenses of Farmers' Institutes,	133 35
Bank Dividends for April,	360 20	Expenses at Treadwell Farm,	33 67
State Tax on Bank Stock refunded,	266 78	Bills paid on account of Annual Exhibition,	67 29
Interest on Mortgage Note,	60 00	Printing Transactions, etc.,	324 88
Cash for New Members,	234 00	Miscellaneous Expenses,	6 55
Proceeds of Annual Exhibition,	705 68	Secretary's account,	275 07
Income from the Treadwell Farm,	217 00	Treasurer's account,	53 70
Amount of Unclaimed Premiums,	125 00	Balance on hand,	65 84
	$2,968 57		$2,968 57

Funds belonging to the Society, Nov. 1, 1892,

10 shares in National Hide and Leather Bank, Boston,	$1,101 87
3 shares in Revere National Bank, Boston,	377 62
18 shares in First National Bank, Salem,	1,914 66
18 shares in Salem National Bank, Salem,	2 000 00
42 shares in Asiatic National Bank, Salem,	1.281 25
12 shares in Mercantile National Bank, Salem,	1 226 50
23 shares in Merchants' National Bank, Salem,	1,189 50
5 shares in First National Bank, Danvers,	375 00
8 shares in National Exchange Bank, Salem,	800 00
16 shares in Warren National Bank, Peabody,	1,595 40
15 shares in South Danvers National Bank, Peabody,	1.471 25
Mortgage Loan,	1,000 00
Cash on hand,	65 84
Total,	$14,398 89

Amount brought forward,	$14,398 89
Amount reported last year,	14 390 86
Gain,	$8 03

G. L. Streeter, Treasurer.

Salem, Jan. 4, 1893.

The above account has been examined this day, and is found correctly added and properly vouched, and the securities as stated.

Jos. H. Phippen, Auditor.

CONSTITUTION

OF THE

ESSEX AGRICULTURAL SOCIETY.

ARTICLE 1. There shall be a President, four Vice Presidents, a Secretary, and a Treasurer, who shall be Trustees, *ex-officio*. The President, Vice Presidents and Secretary shall be elected at the annual meeting by ballot and the Treasurer by the Trustees, annually, at their meeting in November. In addition to these, one Trustee shall be elected annually for each town in the County, and the Trustee for each town shall be elected by members of the Society in said town, at a meeting called for that purpose,* in accordance with notice issued by the Secretary, and shall continue in office until another is elected in his stead; and such election shall be final, and shall constitute the Trustee so elected a member of the Board of Trustees of the Society; and the result of the election in each town shall be communicated as early as possible to the Secretary.

ART. 2. There shall be an Annual Meeting of the Society, at such times as the Trustees shall determine, at which all officers shall be elected. Twenty members at least shall be necessary to constitute a quorum for the transaction of business.

ART. 3. If at any meeting of the Society, or the Trustees, the President and Vice Presidents shall be absent,

*These meetings are held the last Tuesday of October, and the Trustees elected commence their duties at the November meeting of Trustees.

the members present may appoint one from among them to preside at such meeting.

Art. 4. The President, or in case of his absence, either of the Vice Presidents, with the advice of the Trustees, may call a special meeting of the Society; or whenever a written application, with the reason assigned therefor, shall be made by any twelve members of the Society, to the Presidents and Trustees, they shall call such meeting.

Art. 5. The meetings of the Trustees shall be held at such time and place as they shall from time to time agree upon; seven of whom, with the presiding officer, shall make a quorum.

Art. 6. The Trustees shall regulate all the concerns of the Society, during the intervals of its meetings; propose such objects of improvement to the attention of the public, publish such communications, and offer premiums in such form and value as they think proper (provided the premiums offered do not exceed the funds of the Society); and shall lay before the Society, at each of its meetings, a statement of their proceedings and of the communications made to them.

Art. 7. The Secretary shall take minutes of all the votes and proceedings of the Society and of the Trustees, and enter them in separate books; and shall record all such communications as the Trustees shall direct. He shall write and answer all letters relating to the business of the Society.

Art. 8. The Treasurer shall receive all monies due or payable to the Society, and all donations that may be made to it, for which he shall give duplicate receipts, one of which shall be lodged with the Secretary, who shall make a fair record thereof. The Treasurer shall from time to time pay out such monies as he shall have orders for from the Trustees; and shall annually, and whenever thereto required, render a fair account of all his receipts and payments to the Society or a committee thereof. He shall give bonds for the faithful discharge of his duty, in

such sum as the Trustees shall direct, and with such sureties.

ART. 9. A committee shall be appointed annually by the Trustees, to audit the Treasurer's accounts, who shall report to the Society; and the same being accepted, shall be entered by the Secretary in his books.

ART. 10. In case of death, resignation, incapacity, or removal out of the County, of the Secretary or of the Treasurer, the Trustees shall take charge of the official books, papers, and other effects, belonging to the office that may be vacated, and give receipts for the same; which books, papers, etc., they may deliver to some person whom they may appoint to fill the office until the next meeting of the Society, at which time there shall be a new choice.

ART. 11. *Any citizen of the County may become a member of the Society, by paying the sum of THREE DOLLARS to increase the permanent fund of the institution.

ART. 12. A committee shall be raised from time to time, to solicit and receive subscriptions for raising a fund for encouraging the noblest of pursuits, the Agriculture of our county; the same to be sacredly appropriated to that purpose.

ART. 13. All ordained ministers of the Gospel who reside within the County, shall be admitted honorary members of the Society.

ART. 14. In addition to the usual number of Trustees annually elected, the past Presidents of the Society shall be honorary members of the Board of Trustees.

ART. 15. The foregoing constitution may be amended by a proposition of the amendment in writing by a member at a regular meeting; the same to lie over for the action at the next annual meeting of the Society.

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*Members will receive from the Secretary a "certificate of membership." No fines or assessments are ever imposed. Members are entitled to vote in all its transactions, with free use of the Library and a copy of the printed "Transactions" each year.

A premium of six dollars is now offered to the resident of the County obtaining the largest number of new members during the year ending Nov. 1.

OFFICERS OF THE SOCIETY.

FOR 1892–93.

PRESIDENT.

FRANCIS H. APPLETON, of Peabody.

VICE-PRESIDENTS.

JAMES J. H. GREGORY, of Marblehead.
JAMES P. KING, of Peabody.
OLIVER S. BUTLER, of Georgetown.
HORATIO G. HERRICK, of Lawrence.

SECRETARY.

JOHN M. DANFORTH, of Lynnfield.

TREASURER.

GILBERT L. STREETER, of Salem.

HONORARY TRUSTEES.

JOSEPH HOWE, of Methuen.
BENJAMIN P. WARE, of Marblehead.

DELEGATE TO THE STATE BOARD OF AGRICULTURE.

FRANCIS H. APPLETON, of Peabody.

TRUSTEES.

Edmund Gale, Amesbury. Amos P. Alley, Marblehead.
Charles C. Blunt, Andover. Geo. B. Bradley, Methuen.

John W. Lovett, Beverly.
Chas. R. Anderson, Boxford.
S. W. Hopkinson, Bradford.
Chas. H. Preston, Danvers.
Albert E. Lufkin, Essex.
Sherman Nelson, Georgetown.
A. F. Harvey, Gloucester.
B. E. Merrill, Groveland.
Isaac F. Knowlton, Hamilton.
Thomas Sanders, Haverhill.
James W. Bond, Ipswich.
Warren C. Allyn, Lawrence.
Asa T. Newhall, Lynn.
Harry W. Munroe, Lynnfield
Wm. H. Allen, Manchester.
Geo. W. Sargent, Merrimac.
Hiram A. Stiles, Middleton.
William D. Hodges, Nahant.
B. F. Stanley, Newburyport.
Edward Kent, Newbury.
John Barker, No. Andover.
E. P. Barrett, Peabody.
Story D. Pool, Rockport.
Frank P. Todd, Rowley.
Henry A. Hale, Salem.
P. Albert True, Salisbury.
Samuel Hawkes, Saugus.
David Warren, Swampscott.
Frank H. Towne, Topsfield.
David Pingree, Wenham.
L. W. Bailey, West Newbury.

NEW MEMBERS.

Joseph W. Poor, Andover.
Joseph W. Smith, Andover.
John N. Cole, Andover.
Plato Eames, Andover.
Mrs. J. J. Downing, Andov'r.
John J. Mason, Amesbury.
Stephen A. Abbott, Beverly.
Gordon Dexter, Beverly.
William D. Sohier, Beverly.
C. L. Pierson, Beverly.
Robert Saltonstall, Beverly.
Alex. Cochrane, Beverly.
John L. Gardner, Beverly.
Robt. H. Bancroft, Beverly.
Dudley L. Pickman, Beverly.
Chas. H. Dalton, Beverly.
Herman W. Towne, Bradford.
Alvah J. Bradstreet, Danvers.
Chas. W. Page, Danvers.
Frank L. Fabens, Marblehead.
A. W. Peabody, Middleton.
T. D. Boardman, Manches'r.
C. A. Curtis, Manchester.
H. L. Higginson, Manches'r.
Chas. A. Prince, Manchest'r.
John A. Burnham, Manch'r.
Alfred P. Rockwell, Manch'r.
Geo. Wigglesworth, Manch'r.
Alfred Thorp, Methuen.
Frank W. Webster, Methuen.
F. Merriam, Nahant.
James H. Beal, Nahant.
George P. Upham, Nahant.
E. Francis Parker, Nahant.
George Whitney, Nahant.
H. Cabot Lodge, Nahant.
Edward W. Codman, Naha't.
Geo. Abbott James, Nahant.

H. Otis Verry, Danvers.
Geo. A. Peabody, Danvers.
Alfred E. Towne, Georget'n.
Henry Hilliard, Georgetown.
M. N. Boardman, Georgeto'n.
J. F. Jackson, Georgetown.
E. C. Hawkes, Gloucester.
M. K. Abbott, Hamilton.
G. V. L. Meyer, Hamilton.
Geo. H. Hardy, Haverhill.
H. K. Swasey, Haverhill.
Frank S. Webster, Haverhill.
Walter E. Parker, Lawrence.
Alex. N. Bruce, Lawrence.
Lewis P. Collins, Lawrence.
Anson L. Griffin, Lawrence.
Thos. F. Ryan, Lawrence.
A. M. Fay, Lawrence.
John Breen, Lawrence.
Joseph Stowell, Lawrence.
Charles E. Allen, Lynn.
L. H. Wheeler, Lynnfield.
Charles T. Lovering, Nahant.
Arthur H. Parker, Nahant.
E. P. Dodge, Newburyport.
Fred H. Poor, Newbury.
Benj. Pearson jr., Newbury.
Winfield S. Hughes, N. An'r.
Geo. Matthewson, N. Ando'r.
Geo. L. Burnham, N. Ando'r,
Newton P. Frye, N. Andov'r.
W. L. Hill, Peabody.
Willard P. Smith, Rowley.
Rob't S. Rantoul, Salem.
Willis H. Ropes, Salem.
Charles F. Ropes, Salem.
Philip Little, Salem.
William Bickerton, Salem.
Edmund F. Knight, Salem.
Ellis H. Porter, Salem.
Andrew A. Scott, Saugus.
Chas. M. Evans, W. Newb'y.
L. F. Brown, W. Newbury.

CHANGES REPORTED BY THE TRUSTEES IN 1892.

Hiram L. Burpee, Haverhill, from Bradford.
John S. Armitage, Wellesley, from Danvers.
Wm. H. Brown, Marblehead, from Danvers.
J. E. Spring, Brooklyn, N. Y., from Danvers.
Aaron Low, Hingham, Mass., from Essex.
William H. Gray, N. H. from Beverly.
Joseph W. Trask, Danvers, from Beverly.
David Wier, from Beverly.

Members of Essex Agricultural Society.

DECEMBER, 1892.

Previous printed list was in 1890, corrected in 1891 and in 1892 Reports. If any errors are discovered in the following list, please report them to the Secretary. Trustees are requested to report death of members as soon as they occur, with printed notice, when convenient.

AMESBURY—24.

Bailey, O. S.	Gale, Foster	Mason, John J.
Cammet, Samuel	Goodwin, E. A.	Morrill, Geo. T.
Chesley, M. B.	Hill, Albert C.	Morse, Daniel L.
Chesley, John F.	Hill, J. Henry	Nelson, David O.
Currier, W. H. B.	Hollander, Lambert,	Sawyer, Aaron Jr.
Davis, B. Lewis	Huntington, B. F.	Tibbetts, William B.
Feltch, Elbridge S.	Little, J. P.	True, Eben
Gale, Edmund	Lane, T. W.	Vining, William F.

ANDOVER—54.

Abbott, James J.	Bodwell, H. A.	Downing, Mrs. J. J.
Abbott, Nathan F.	Buchan, George	Eames, Plato
Abbott, Hartwell B.	Buchan, George W.	Flint, John H.
Abbott, John B.	Butterfield, J. P.	Foster, George W.
Andrews, M. C.	Carter, Charles L.	Foster, Moses
Barnard, Edwin H.	Carruth, Isaac	Foster, George C.
Bailey, Moses A.	Chandler, Joshua H.	Foster, F. H.
Bailey, Samuel H.	Cheever, James O.	Gould, Milo H.
Blunt, Charles C.	Cole, John N.	Gulliver, E. Francis
Blunt, Joseph H.	Cummings, C. O.	Harriman, Thos. P.

Hayward, Henry A.
Hidden, David I. C.
Holt, E. F.
Holt, Ballard
Jenkins, John B.
Jenkins, E. Kendall
Johnson, Francis H.
Johnson, S. K.
McLawlin, Henry
Moor, J. Warren
Noyes, Henry P.
Poor, Joseph W.
Playdon, Alfred G.
Rea, Jasper
Reynolds, James H.
Ripley, George
Smith, James B.
Smith, John L.
Smith, Peter D.
Smith, Benjamin F.
Smith, Joseph W.
Thayer, Samuel
Tucker, William
Upton, Edward C.

BEVERLY—100.

Abbott, Stephen A.
Andrews, Joseph F.
Appleton, Nathan D.
Appleton, Edw. H.
Appleton, Isaac
Avery, Mark B.
Baker, John I.
Bancroft, Robert H.
Bennett, Robert G.
Burnham, O. B.
Brewer, George
Carter, John W.
Caldwell, Charles E.
Clark, George
Clark, Arthur E.
Clark, Aug. N.
Clark, Peter E.
Cochrane, Alex'r
Connelly, Stephen
Dalton, Charles H.
Danforth, E. F.
Dexter, Gordon
Dodge, Andrew
Dodge, Benjamin N.
Dodge, Benjamin B.
Dodge, Fred A.
Dodge, Israel W.
Dodge, Joshua S.
Dodge, Forest C.
Dodge, Lucius B.
Dodge, Walter F.
Elliot, John T.
Endicott, Robert R.
Foster, David L.
Foster, Issacher jr.
Foster, William A.
Foster, William B.
Friend, Seth
Giles, Benjamin V.
Gardner, John L.
Haven, Franklin
Herrick, Joseph H.
Hill, Hugh
Howse, Thomas W.
Lee, Asa F.
Lord, Cyrus W.
Lovett, William H.
Larcom, Rufus
Lawrence, C. A.
Loring, Augustus P.
Loring, Wm. Caleb
Lovett, Francis S.
Lovett, John W.
Lummus, Elijah E.
Mason, Alfred A.
Mason, George
Mason, Charles A.
Mason, Lyman
Marsters, James A.
Mayo, Josiah
Mitchell, John E.
Morgan, William C.
Morse, John T.
Moulton, Charles
Moulton, John A.
Munsey, John G.
Murney, John M.
Norwood, Francis
Obear, Ezekiel F.
Paine, Charles C.
Perry, Albert
Phillips, J. C. Mrs.
Pickett, Charles
Pierson, C. L.
Pickman, D. L.
Pitman, Mark
Pope, Jasper
Porter, Adoniram
Preston, Ezra
Raymond, John W.
Raymond, J. W. jr.
Saltonstall, Robert
Sawyer, E. C.
Sohier, Wm. D.

Stephens, Augustus
Stickney, George W.
Stone, Samuel H.
Swasey, E.
Trask, J. G.
Trafton, Darling F.
Trask, Joseph W.
Vittum, Albert
Walker, Lawson
Webb, Alden
Wallis, Joseph A.
Williams, Augustus
Whitcomb, Austin
Woodbury, L., jr.
Woodbury, H. W.
Woodbury, Rufus

BOXFORD—27.

Anderson, Charles R.
Andrew, Isaac W.
Austin, Charles F.
Austin, George B.
Barnes, B. S.
Chadwick, Geo. W.
Chadwick, James W.
Chadwick, Walter I.
Cleveland, James P.
Cole, David M.
Cole, John K.
Cole, Warren M.
Cole, Wm. Kimball
Day, Isaac C.
Day, Mrs. John
Herrick, Israel
Ladd, John I.
Nason, James H.
Parkhurst, John
Parkhurst, John W.
Pearl, Edw. E.
Pearl, John M.
Perley, Charles
Sawyer, Thomas,
Styles, Charles F.
Wood, John T.
Wood, William H.

BRADFORD—34.

Bradstreet, Justin E.
Cogswell, Doane
Cogswell, George
Ellis, John A.
Emerson, Charles B.
Gage, Edwin V.
Hale, H. H.
Hazeltine, Charles
Hazeltine, John
Hilton, William
Hilton, Charles M.
Hopkinson, Sam'l W.
Johnson, Charles G.
Johnson, Laburton
Kimball, Albert
Kimball, Leverett
Kimball, William B.
Kimball, Byron G.
Kimball, M. Tenney
Kingsbury, John D.
Knight, Albert A.
Ladd, George W.
Little, Mrs. M. P.
Ordway, Alfred
Peabody, Walter S.
Peabody, Frank
Peabody, Daniel
Perley, John
Phillips, G. Franklin
Tewksbury, John B.
Thornton, William
Towne, Herman W.
Wales, Herbert E.
Webster, Charles E.

DANVERS—94.

Barton, J. Webb
Berry, Allen A.
Berry, Eben G.
Batchelder, J. Q. A.
Bradstreet, Alvah J.
Bradstreet, Elijah
Bradstreet, William
Butler, J. C.
Clark, N. J.

Carlton, O. Loring
Carlton, Wm. B
Day, Clarence
Dempsey, L. P.
Dodge, Francis
Eaton, Winslow W.
Fellows, Alfred
Fernald, Oliver
Fisher, Franklin W.
Fowler, Augustus
Fuller, Solomon
Gould, Charles H.
Gustin, John H.
Harrigan, D. J.
Hood, Joseph E.
Hutchinson, W. P.
Jacobs, Wm A.
Jackson, Eben
Jones, L. H.
Juul, Conrad
Kimball, Francis O.
Kimball, Joel
Kirby, Patrick
Langley, J. R.
Learoyd, A. P.
Legro, John C. P.
Lyford, Francis W.
Massey, Dudley A.
Marston, Jacob
Morrison, L. L.
Mudge, Augustus
Nichols, Andrew
Nichols, Andrew, jr.
Newhall, Benj. E.
Newhall, Henry
O'Neal, T. H.
Page, Charles W.
Patch, Abraham
Peabody, George H.
Peabody, George A.
Peart, William B.
Perley, Dean A.
Perley, Edward P.
Perkins, Henry A.
Perkins, Warren G.
Perkins, William P.
Perkins, M. Sumner
Pettingill, David A.
Pillsbury, H. H.
Piper, G. M. T.
Pope, Ira P.
Pratt, Amos
Preston, Charles H.
Putnam, Israel H.
Putnam, Joseph C.
Putnam, John A.
Putnam, Joel
Putnam, Otis F.
Pratt, George
Porter, John W.
Pope, Daniel P.
Proctor, Nathan P.
Richardson, James
Richards, C. S.
Roberts, Oliver
Rollins, Jonas
Ropes, Joseph E.
Rice, Chas. B.
Sears, John A.
Spaulding, Sam'l W.
Swinerton, John
Smart, John L.
Tapley, George
Tapley, Gilbert A.
Trask, Joseph W.
Upton Franklin W.
Verry, Augustus
Verry, H. Otis
Verry, Henry
Walcott, Wm. H.
Waldron, E. T.
Weston, Mrs. L. P.
White, Henry A.
Woodis, Alden B.
Woodman, Edw. E.
Whipple, John F.
Wilkins, Fred'k A.

ESSEX—16.

Andrews, Elias
Burnham, Wash.
Burnham, D. B.
Burnham, Wm. Howe
Choate, Rufus
Cogswell, Charles B.
Haskell, David L.
Haskell, George
Knowlton, Aaron
Knowlton, Moses
Knowlton, Perry B.
Lee, Edward K.
Low, George P.
Low, Josiah
Lufkin, A. E.
McDonald, Daniel

GEORGETOWN—25.

Bateman, A. P.
Boardman, Moses N.
Butler, Oliver S.
Chapman, Jonathan
Harriman, Hiram N.
Hilliard, Henry
Hoyt, Martin L.
Jackson, John L.
Marble, Nathaniel
Nelson, Charles W.
Nelson, Sherman
Osgood, Stephen
Perley, David E.
Pettingill, Henry
Pillsbury, J.
Poor, Samuel T.
Ridley, Amos
Spofford, Sumner P.
Tenney, George J.
Tenney, Gorham D.
Tenney, Moses
Tenney, Orlando B.
Towne, Alfred E.
Weston, George S.
Wheeler, William S.

GLOUCESTER—79.

Babson, Fitz J.
Babson, Horatio
Babson, Osman
Barrett, Charles P.
Bennett, Charles
Bradford, George R.
Brown, Edward H.
Burnham, A. M.
Burnham, H. A.
Burnham, S. A.
Calef, John C.
Carter, John S.
Carter, Sherman J.
Clark, John
Cole, Israel H.
Conant, Thomas
Cook, Benjamin F.
Corliss, Benjamin H.
Corliss, John
Cronin, John
Curtis, Samuel jr.
Davis, James
Davis, William P.
Dennen, George
Dodd, Stephen
Dolliver, John S.
Dolliver, William C.
Dolliver, William P.
Fears, Robert R.
Ferguson, Thos. B.
Foster, Jeremiah
Garland, Joseph
Griffin, Bennett
Grover, Charles E.
Harvey, Alonzo F.
Haskell, H. C. L.
Haskell, William H.
Hawkes, E. C.
Herrick, GardnerW.
Knowles, Thomas J.
Lane, Andrew
Lane, George
Lawrence, R. C.
Lovett, John H.
Low, David W.
Low, Frederic F.
Marr, Chester, jr.
Mayo, Israel C.
Norwood, George
Parsons, W. Frank
Patillo, Alexander
Pew, William A.
Phillips, N. H.
Plumer, David
Presson, David S.
Presson, Alfred
Price, Augustus E.
Proctor, Joseph O.
Proctor, Wilbur F.
Ricker, Richard W.
Roberts, Joshua
Rogers, Allan
Rogers, John S.
Rust, William P.
Sanford, H. G.
Shepherd, Joseph C.
Somes, John E.
Stacy, John H.
Stanwood, Barnard
Story, Cyrus
Thompson, Chas. P.
Webster, Nathaniel
Wetherell, M. L.
Wilson, John J.
Witham, Addison
Wonson, AugustusH.
Wonson, F. G.
Wonson, George M.
Wonson, J. W.

GROVELAND—20.

Balch, Thomas H.	Hopkinson, W. H.	Savary, Charles P.
Fegan, Henry C.	Ladd, J. B. P.	Spofford, Henry H.
George, Edwin B.	Ladd, Nathaniel E.	Stacy, Edward M.
George, Samuel B.	Longfellow, N.	Stickney, Abel
Harrington, Edward	Martino, Philip H.	Tenney, George H.
Harriman, Moses H.	Merrill, Burton E.	Woodbury, Louis A.
Harriman, Abel S.	Pemberton, L. K.	

HAMILTON—31.

Abbott, M. K.	Dodge, George R.	Norris, George
Allen, Francis R.	Dunnels, Ira A.	Norwood, C. J.
Brown, William A.	Ellis, George W.	Patch, Mrs. Oliver
Creamer, George G.	Gardner, A. P.	Putnam, Charles O.
Dane, Ephraim A.	Gibney, George H.	Rankin, Eli D.
Dane, George E. F.	Kimball, Isaac W.	Robinson, E. P.
Dane, John jr.	Knowlton, Franklin	Safford, Daniel E.
Dane, William A.	Knowlton, Isaac F.	Smith, Alvin
Dane, Sylvester	Lamson, Jarvis,	Whipple, Em. A.
Dodge, Emerson P.	Meyer, Geo. V. L.	
Dodge, George B.	Nason, Daniel A.	

HAVERHILL—69.

Barnes, B. Frank	Emerson, E. A.	Lackey, Andrew
Berry, J. M.	Farnsworth, J. H.	Little, E. C.
Brickett, Benj. F.	Fellows, C. H.	Little, J. G. S.
Blake, J. Albert	Frost, Henry	Marsh, John J.
Bodwell, Stephen	Gale, John E.	Messerve, Wm. S.
Brickett, Barnard	Goodwin, Rufus	Mitchell, E.
Butters, Charles	Goodwin, John H.	Moody, Wm. H.
Chase, C. W.	Hanson, M. W.	Moody, H. L.
Cheever, H. W.	Haseltine, Amos jr.	Morse, John H.
Corliss, Charles	Hardy, George H.	Merrill, Giles
Dewhurst, James	Hooks, Daniel	Nichols, John B.
Eaton, B. F.	Howe, Moses	Nichols, J. B.
Eaton, Harrison	Ingalls, E. T.	Ordway, Joshua H.
Emerson, Albert	Johnson, Henry H.	Peabody, Stephen

Peters, Daniel
Poore, F. W.
Porter, Dudley
Quinby, T. W.
Randall, John P.
Richardson, John B.
Ridgeway, Jos.
Rhodes, C. N.
Sanders, Thomas
Smith, Geo. S.
Sprague, W. W.
Swasey, H. K.
Stewart, John
Taylor, Martin
Taylor, Oliver
Titcomb, Beniah
Wadleigh, Levi C.
Webster, Ebenezer
Webster, Frank S.
Webster, E. F.
Webster, Richard
West, H. K.
West, James F.
White, James D.
Whittier, Alvah
Whittier, Warner R.
Winchell, James H.

IPSWICH—41.

Abbott, Joseph B.
Appleton, Francis R.
Appleton, Daniel F.
Baker, S. N. jr.
Bond, James W.
Brown, Everett K.
Brown, S. Albert
Brown, William G.
Caldwell, Abraham
Clark, Erastus
Fall, Tristam B.
Fellows, Alonzo B.
Gould, John J.
Gould, Walter F.
Grant, Joshua B.
Green, George H.
Haskell, George
Hobbs, John
Hodgdon, George
Hodgkins, Augustine
Horton, Joseph
Johnson, George E.
Jordan, Mrs. Robert
Kimball, Daniel
Kinnear, James
Kinsman, Joseph F.
Kinsman, William H.
Kinsman, Willard F.
Marshall, Joseph
Perkins, Isaac E. B.
Reddy, Michael
Ross, Joseph
Rutherford, Aaron A.
Shatswell, Nathaniel
Smith, Webster
Stone, Augustine
Story, Alden
Treadwell, William
Underhill, J. C.
Wade, Asa
Whittier, Maynard

LAWRENCE—81.

Allyn, Warren E.
Ames, M. B.
Austin, M. C.
Ball, F. J.
Bell, Charles U.
Boehm, Adolph G.
Breen, John
Bruce, Alex'r N.
Butler, Albert E.
Cabot, George D.
Clarke, Charles
Colburn, George W.
Collins, Lewis P.
Currier, Eben B.
Curran, Maurice K.
DeCourcey, C. A.
Drew, J. D.
Durant, W. A.
Dyer, Arthur W.
Farrell, John
Fay, John
Finn, John L.
Flynn, Edward
Fitzgerald, Wm.
Ford, George
Ford, Patrick
French, A. J.
Gile, William H.
Griffin, Anson L.
Hall, Dyer S.

Herrick, H. G.
Hills, George W.
Hood, Gilbert E.
Holt, Lewis G.
Hubbard, Leavitt
Jackson, Joseph
Jewett, William S.
Joyce, James W.
Junkins, George S.
Kelleher, W. A.
Kittredge, G. H.
Kline, George E.
Lewis, S. S.
McAllister, J. G.
Mahoney, W. O.
McCarthy, Patrick
Merrill, George S.
Moore, L. C.
Norwood, John K.
Oswald, William
Page, E. F.
Parker, Walter E.
Patterson, D. H.
Pedrick, W. R.
Richardson, E. P.
Robinson, H. B.
Ruht, Joseph
Russell, George W.
Russell, W. A.
Ryan, Thomas F.
Sanborn, Edwin M.
Sargent, A. E.
Saunders, Daniel
Saunders, Caleb
Shattuck, Joseph
Simpson, James R.
Small, Henry
Stanley, J. J.
Stearns, A. W.
Stowell, Joseph
Sylvester, Wm. H.
Talbot, C. C.
Tewksbury, R. H.
Tompkins, N. S. S.
Truell, Byron
Vector, F. M.
Wardsworth, CoraM.
Webster, H. K.
Wellman, John R.
Wiggin, Gilman P.
Wilson, Henry S.

LYNN—104.

Aldrich, A. P.
Allen, Charles
Allen, Walter B.
Andrews, Randall
Baker, Ezra
Bates, Edwin
Bates, Walter E.
Bates, William H.
Bates, Fred H.
Bates, Wallace
Beckford, Ebenezer
Beede, C. O.
Berry, Henry N.
Berry, Benj. J.
Bray, E. E.
Bray, Wm. A.
Breed, Amos F.
Breed, George H.
Breed, Henry H.
Breed, Richard
Butman, Joseph E.
Butman, Wm. W.
Cain, Julia A. Mrs.
Chase, L. H.
Chase, Amos F.
Cross, Alfred
Croscup, James A.
Cressey, John S.
Dwyer, Edward F.
Emery, George E.
Farrar, Joseph E.
Foster, George
Fry, Charles C.
Goodell, J. W.
Goodwin, Joseph W.
Haskell, John C.
Harnden, Henry C.
Harris, N. S.
Hawkes, Nathan M.
Heath, Henry A.
Heath, James
Hill, E. L.
Hopkins, Fred I.
Hovey, Rufus P.
Ingalls, James W.
Ireson, S. S.
Johnson, Jacob A.
Jepson, Eli
Joint, William H.
Kimball, Rufus
King, W. P.
Knox, David
Lamphier, Joseph A.
Lamphier, W. L.
Lewis, Jacob M.
Mace, Frank W.
Marsh, George E.
Marsh, S. E.
May, Lyman A.
McBrien, Richard

McKenney, John H.
Merritt, Timothy
Mockett, Joseph E.
Mower, A. A.
Mower, M. V. B.
Mudge, John
Neal, Peter M.
Newhall, Asa T.
Newhall, G. A.
Newhall, Hiram L.
Newhall, George T.
Nichols, H. S.
Nichols, Otis
Nichols, Thomas P.
Norris, George jr.
Noyes, George C.
Oliver, John E.
Parsons, Charles E.
Pevear, G. K.
Pevear, H. A.
Phillips, B. Frank
Potter, Edward P.
Preble, J. H.
Ramsdell, Charles H.
Richards, Edward A.
Rogers, Ira D.
Roney, Simon J.
Rounds, Herbert L.
Rowell, B. W.
Sargent, George D.
Sheehan, John
Shorey, John L.
Shorey, George L.
Sawyer, J. A. J.
Townes, Q. A.
Tyler, Thaddeus W.
Usher, Roland G.
Vickary, J. C.
Ward, Benj. A.
Whipple, Geo. H.
Willey, James L.
Wilson, J. C.
Winslow, Aaron
Winslow, G. W.

LYNNFIELD—19.

Bancroft, J. K.
Cox, Thomas E. jr.
Cooper, C. A.
Danforth, John M.
Derby, Charles H.
Gerry, Elbridge F.
Griffin, George F.
Hawkes, George L.
Herrick, George E.
Mansfield, Andrew
Munroe, Harry W.
Munroe, Wilbur J.
Newhall, Frank
Perkins, John
Perkins, J. Winslow
Roundy, George M.
Roundy, W. R.
Smith, Henry E
Wheeler, L. H.

MANCHESTER—18.

Allen, Wm. H.
Baker, John
Boardman, T. Dennie
Burnham, John A.
Cheever, John H.
Curtis, C. A.
Cheever, Wm. M.
Coolidge, T. Jefferson
Friend, Daniel W.
Higginson, Henry
Lee, Allen
Merriam, Arthur M.
Price, John
Prince, Chas. A.
Rockwell, A. P.
Rabardy, Julius F.
Sturgis, Russell
Wigglesworth, Geo.

MARBLEHEAD—14.

Alley, Amos P.
Appleton, Thomas
Clough, A. W.
Cloutman, B. Henry
Cronin, Michael
Dennis, W. John

Gregory, J. J. H.
Fabens, Frank L.
Hathaway, Amos C.
Hathaway, Joseph B.
Hathaway, Seth W.
Paine, Thomas W.
Phillips, Wm. S. jr.
Ware, Benjamin P.

MERRIMAC—8.

Adams, George
Haskell, Wm. H.
Loud, L. C.
Pike, James D.
Sargent, M. Perry
Sargent, Bailey
Sargent, Geo. W.
Sargent, P. Willis

METHUEN—33.

Bradley, George B.
Buswell, Joseph E.
Butters, George A.
Butters, W. H.
Crosby, John S.
Dow, Virgil
Dwyer, Michael
Emerson, Jacob jr.
Frederick, John W.
George, John H.
Goss, Chas. E.
Hall, C. H.
How, Joseph
How, Joseph S.
Mann, C. W.
Morrison, D. T.
Noyes, David W.
Pedlar, S. J.
Phippen, G. S.
Parker, James O.
Rogers, William M.
Russell, Fred A.
Russell, A. P.
Sargent, S. G.
Shirley, John W.
Sawyer, Chas. M.
Sleeper, Wm. C.
Smith, Walter
Swan, Leverett
Thurlow, J. E.
Tozier, C. L.
Thorp, Alfred
Webster, Frank W.

MIDDLETON—11.

Berry, William
Christopher, Wm. P.
Currier, Geo. A.
Flint, James
Peabody, A. W.
Stiles, Farnum
Stiles, Hiram A.
Stewart, Mrs. S. A.
Weston, Solomon W.
Wilkins, George P.
Wilkins, Lyman S.

NAHANT—13.

Beal, James H.
Codman, Edw. W.
Goodale, Byron
Hodges, William D.
James, Geo. Abbott
Lodge, Henry Cabot
Lovering, Charles T.
Merriam F.
Otis, Herbert F.
Parker, E. Francis
Parker, Arthur H.
Upham, George P.
Whitney, George

NEWBURY—57.

Adams, Daniel D.
Adams, George W.
Adams, James K.
Adams, George E.
Adams, Charles E.
Bray, Richard S.
Bray, George W.
Boynton, Charles
Coffin, Wm. P.
Colman, Moses
Dole, Nathaniel
Forbes, A. B.
Hale, Stephen P.
Howard, Horatio M.
Ilsley, Edwin
Ilsley, Paul M.
Ilsley, Joseph
Jaques, Richard
Jaques, Richard T.
Jaques, RichardT. jr.
Jaques, William
Kent, Edward
Knight, Edward S.
Little, Carleton
Little, Edward F.
Little, Joseph
Little, Nathaniel jr.
Little, William
Little, Wm. Burke
Longfellow,HoraceF
Longfellow, Joseph
Longfellow,Jos.Mrs.
Lucy, Gideon R.
Lunt, Charles M.
Moody, Nath'l W.
Moynihan,Cornelius
Newman, Sidney F.
Noyes, Edwin P.
Noyes, Justin
Noyes, Horace P.
Noyes, James
Noyes, Moses K.
Perkins, Wm. W.
Perkins, Frank
Perkins, Paul A.
Perkins, John W.
Pearson, Benj. jr.
Plummer, Daniel
Plummer, Geo. H.
Rogers, Abial
Rolf, John C.
Rolfe, Joseph N.
Tenney, Henry L.
Tenney, Elbridge
Tenney, Daniel G.
Toomey, Mathew H.
Woods, Charles W.

NEWBURYPORT—58.

Adams, Philip D.
Adams, J. Quincy
Adams, Rufus
Allen, John W.
Balch, John H.
Bartlett, Chas. S.
Bartlett, T. K.
Batchelder, Dan'l C.
Bayley, Wm. H.
Cashman, Jeremiah
Capers, Thomas
Currier, Warren
Colman, James C.
Colman, William T.
Cook, T. N.
Cutter, Eben P.
Delano, Otis
Dodge, E. P.
Evans, Frank W.
Griffin, Eliphalet
Hale, Joshua
Hart, James S.
Hewett, C. C.
Huff, William
Jackman, George W.
Johnson, Wm. R.
Kent, Otis L.
Knights, GeorgeW.
Knight, Joseph
Lewis, Samuel W.
Little, Hector
Little, John G.
Lunt, Charles
Maguire, C. N.
Merrill, Enoch
Moseley, Edward A.
Moseley, Edward S.
Mosely, Fred'k S.
Moulton, Henry W.
Moulton, Joseph
Newhall, Asa T.
Noyes, Isaac P.

Ordway, A. D.
Perley, R. M.
Perkins, Charles
Plummer, Moses A.
Plummer, Wm. C.
Poore, George H.
Rowe, D. T.
Sargent, John W.
Smith, Joseph B.
Stanley, B. F.
Stanley, J. C.
Titcomb, Paul
Tilton, Enoch
Toppan, Edward S.
Winkley, J. Otis
Winkley, Paul T. jr.

NO. ANDOVER—52.

Adams, Edward
Albeget, Lewis
Averill, George L.
Berry, Albert
Bodwell, S. B.
Butterfield, Chas. A.
Bassett, Leon H.
Barker, John
Burnham, Geo. L.
Carlton, Daniel A.
Carlton, Amos D.
Chever, William J.
Davis, George G.
Davis, George E.
Davis, Geo. L.
Dale, William J.
Dale, Wm. J. jr.
Farnham, B. H.
Farnham, Byron K.
Farnham, Mrs. B.
Farnham, J. L.
Farnham, W. Benj.
Foster, J. Frank
Foster, Orrin
French, J. D. W.
Frye, Newton P.
Fuller, Abijah P.
Goodhue, Hiram P.
Greene, E. W.
Hayes, Walter H.
Holt, Peter, jr.
Huges, Winfield S.
Jenkins, Benj. F.
Jenkins, Milon S.
Johnson, James T.
Johnson, Charles F.
Kittredge, Hannah E.
Loring, Geo. B. jr.
Manion, John
Mathewson, George
Montgomery, Jas. A.
Osgood, Isaac F.
Phillips, Willard P.
Poor, James C.
Riley, Henry
Robinson, Addison M.
Stevens, Moses T.
Stevens, Oliver
Symonds, Frederick
Wilson, Abiel
Wardwell, T. O.
Wiley, John A.

PEABODY—74.

Appleton, Francis H.
Barrett, E. Pope
Barrett, Edward P.
Bodge, Henry
Buxton, Henry V.
Brown, Rufus H.
Brown, Lewis
Bushby, N. A.
Batchelder, Cyrus T.
Brown, W. H.
Brown, R. S.
Blake, E. L.
Blaney, Stephen
Buxton, Simon P.
Carroll, Thomas
Chadwick, Orville B.
Clark, A. B.
Cody, James F.
Colcord, J. L.
Cummings, Daniel
Curtis, Andrew
Dole, William T.
Durkee, T. C.
Emerton, C. S.
Foster, Ira
Foster, George M.
Goodale, Jacob O.
Hayes, Andrew J.
Haven, C. B.
Hill, W. L.

Hills, Benjamin M.
Herrick, John E.
Hoag, Charles E.
Hubbard, A. J.
Hutchinson, C. K.
King, George H.
King, J. Augustus
King, James P.
King, Jonathan
Linehan, John
Marsh, Fred
Mansfield, E.
Mansfield, Arthur W.
Merrill, Amos
Morris, R. E.
Needham, George A.
Needham, Joseph S.
Newhall, Orlando F.
Nourse, Samuel W.
Osborne, Abraham C.
Osborn, Lyman E.
Osgood, William
O'Keefe, Timothy
Pepper, George W.
Preston, Levi
Quint, Nicholas M.
Raddin, Alonzo
Richardson, W. B.
Rogers, Jacob C.
Saltonstall, Henry
Sheen, William E.
Southwick, Sumner
Taylor, Benj. H.
Taylor, Geo. W.
Thomas, Josiah B.
Twiss, Everett M.
Viles, Bowman
Walcott, John G.
Wallace, David B.
Walton, George D.
Wheeler, Benj. S.
Whipple, Horace P.
Wiley, William F.
Wilson, Robert H.

ROCKPORT—23.

Appleton, Zeno A.
Blatchford, Eben
Bray, Humphrey P.
Dodd, Stephen
Grimes, Loring
Lane, Andrew
Lane, Andrew, jr.
Lane, Horace
Low, Martha J. Mrs.
Low, William
Manning, John J.
Manning, William N.
Merridew, James B.
McNeil, William
Nickerson, Lewis E.
Norwood, Gorham
Patch, William H.
Pool, Story D.
Rowe, Amos
Smith, Allen
Smith, William H.
Smith, Solomon
Tufts, George W.

ROWLEY—25.

Bartlett, B. W.
Blodgette, George B.
Daniels, George E.
Dodge, Joseph D.
Dummer, Nath'l N.
Hale, Clara A.
Hale, Daniel H.
Hale, Thomas
Hale, Thaddeus
Hale, Agnes H.
Hale, T. P.
Keyes, Eben S.
Lambert, Mary G.
Mahoney, John
Mighill, Charles P.
Pike, John
Prime, Daniel B.
Potter, Edward H.
Smith, Willard P.
Stockbridge, Seth
Stockbridge, A. J.
Tenney, John H.
Todd, Frank P.
Todd, John F.
Todd, J. Scott

SALEM—66.

Andrews, Samuel P.	Jones, Samuel G.	Pickering, Benjamin
Almy, James F.	Kemble, Arthur	Rantoul, Robert S.
Abbott, Nathaniel	Knight, Edmund F.	Robinson, John
Bickerton, William	Lamson, Frederick	Ropes, Reuben W.
Curwen, James B.	Little, Philip	Rogers, A. D.
Chase, George	Lord, William	Reynolds, Henry E.
Curwen, Samuel H.	Lander, William A.	Rowell, E. F.
Clark, Charles S.	Mack, William	Ropes, Willis H.
Collins, Wm. F. M.	Manning, Robert	Ropes, Charles F.
Creesy, George W.	Merrill, E. H.	Ropes, John C.
Daland, John	Merritt, David	Saunders, Robert J.
Endicott, Wm. C.	Morse, E. Henry	Shreve, O. B.
Felt, John	Northend, Wm. D.	Spencer, Charles P.
Foote, Caleb	Peabody, John P.	Swasey, John A.
Foster, Joseph C.	Perkins, E. R.	Streeter, Gilbert L.
Foster, William J.	Porter, Ellis H.	Tracey, Patrick
Goodhue, William P.	Putnam, Henry W.	Ware, Horace C.
Gardner, D. B.	Phippen, Geo. D.	Wheatland, Henry
Hathaway, John	Potter, William	White, Frank W.
Hale, Henry A.	Pingree, David	Whitmore, Wm. F.
Holman, Lyman	Pettingell, George	Waters, David P.
Horton, William A.	Page, John G.	Wyman, Isaac C.
Ives, John S.	Page, James E.	

SALISBURY—15.

Bartlett, Moses J.	Getchell, N. Tracy	Pettengill, Wesley
Dole, Edward G.	Greeley, Furmer H.	Pettengill, John Q. A.
Dow, George A.	Greenleaf, Wm. H.	Smith, John F.
Eaton, John F.	Littlefield, Hiram	Thornton, Robert
Evans, John Q.	Littlefield, George E.	True, P. Albert

SAUGUS—15.

Blodgett, J. W.	Hawkes, Samuel	Newhall, Joseph
Faxon, M. B.	Hawkes, Louis P.	Noble, William
Faxon, John B.	Hawkes, Lewis W.	Penney, George H.
Flye, John	Hill, Alfred C.	Scott, Andrew
George, Henry M.	Newhall, Herbert B.	Whitehead, Joseph

SWAMPSCOTT—7.

Crosman, S. F.	Rowe, Allen	Warren, David
Pettingell, L. D.	Washburne, John	Warren, Mrs. N. J.
Pettingell, S. J.		

TOPSFIELD—16.

Averill, George F.	Manning, James	Towne, Frank H.
Bradstreet, Dudley	Mason, Alphonso	Ward, Richard
Herrick, Charles	Peabody, Charles J.	Wildes, Eugene L.
Hood, Salmon D.	Pike, Baxter P.	Wilson, James
Lamson, J. Arthur	Poole, Benjamin	Woodbury, Isaac M.
Leach, Charles H.		

WENHAM—18.

Alley, Henry	Dodge, Robert F.	Morgan, William B.
Batchelder, T. Wilson	Dodge, George F.	Pingree, David
Cole, Zacariah	Dodge, William P.	Peabody, George
Conant, John P.	Hobbs, A. F.	Patch, Henry
Day, Everett K.	Hobbs, Henry	Perkins, Nath'l P.
Demsey, H. H.	Kavanagh, J.	Tilton, George H.

WEST NEWBURY—45.

Bailey, William P.	Gordan, J. R.	Newell, Richard
Bailey, Lawrence H.	Gowen, Mrs. C. W.	Noyes, Stephen E.
Bartlett, M. Walsh	Gowen, Francis H.	Ordway, Cyrus D.
Boynton, Eben M.	Gowen, Oscar	Ordway, Cyrus K.
Brown, Hayden	Jacques, Romulus	Ordway, Charles W.
Brown, Leander F.	Jacques, Stephen A.	Pierce, George J.
Bryant, William	King, T. J.	Pierce, Henry J.
Carr, E. Dole	Lane, Isaac N.	Poor, Fred H.
Carr, Samuel	Merrill, William	Poore, Moses H.
Connor, M. H.	Merrill, William E.	Prince, S. R.
Evans, Charles M.	Merrill, Henry	Rogers, George C.
Follansbee, B. A.	Moore, Alfred L.	Stanwood, Moses P.
Flook, George L.	Nason, Ezekiel G.	Talton, John C.
Goodridge, David L.	Nason, Henry F.	Thurlow, Thomas C.
Goodridge, H. M.	Nelson, Daniel P.	Titcomb, Silas M. C.

NON-RESIDENTS—140.

Allen, Henry C., Keene, N. H.
Alley, James E.
Ames, Amos L., Tacoma, Wash.
Armitage, John S., Wellesley
Babson, Gustavus, jr., Seward, Neb.
Balch, Eustis, California
Balch, William H., Malden
Baker, John, Sanborn, Col.
Barker, John G., Boston
Beckford, C. H., Boston
Bennett, Charles, So. Gardner, Mass.
Blake, J. P., Newton
Black, James D., Harvard
Bodwell, Henry A., Keene, N. H.
Bodwell, Jos. R., Hallowell, Me.
Brackett, H. Clarke, Virginia
Burnham, Choate, Boston
Burnham, Ira T., Lexington
Butler, Benjamin F., Lowell
Caldwell, L., Jacksonville, Fla.
Campbell, Charles H., New Rochelle, N. Y.
Carey, James, Quincy
Carey, James, New York
Chapin, W. C., Providence, R. I.
Chase, Joseph S., Malden
Cheever, John H., Somerville
Clarke, Joseph F., Boston
Cleveland, H. W. S., Chicago
Colby, Charles A., New York
Currier, William A., Boston
Day, Abraham, Boston
Davis, Phineas E., Chicago
Dodge, Albert W., Brighton
Dodge, John S., Chicopee
Dole, Francis F., Chicopee
Drew, Charles R., Medford
Eaton, Thos., Harriston, Ill.
Emanuel, Henry, New York
Estes, Alden C., San Landro, Cal.
Gilman, Frederic, N. H.
Farwell, Edwin C., Reading
Felton, Wm. H., Sherborn
Fernald, Henry B., Washington
Flint, Horace P., Boston
Foster, James B., Melrose
Fowler, W. W., Plymouth
French, Charles, Davenport, O.
French, Geo. H., Davenport, O.
Gannett, W. W., Boston
Gaffney, Cornelius, So. Boston
Gilman, S. E., Kingston, N. H.
Gookin, Samuel F., Boston
Green, John A., New York
Greene, Arthur M. Philadelphia
Gulliver, Francis, Binghampton N. Y.
Hadley, Wm., Boston
Hale, Joseph S., Lugonia, San Bernandino Co., Cal.
Hayes, J. F. C., Iowa
Hicock, S. S., Rochester, N. H.
Hill, E. L., Templeton, Mass.
Hill, Mark F., Derry, N. H.
Holt, H. E., Lexington
Hubbard, J. G., Hampste'd, N. H.
Hutchinson, C. H., Rhinebeck, N. Y.
Kent, Albert S., Colorado
Kimball, Jonathan, Boston
Kimball, W. F., Providence, R. I.
King, D. Webster, Boston
Knight, J. M., Maine
Lamb, Wm. D., Southbridge

Lake, Chas. H., Churchill, Md.
Lovering, John H., Marlborough
Low, Sidney, Groton
Low, Aaron, Hingham
Lyford, Geo. H., New York
Mann, Otis, Springfield
Martin, Walter T., Dover, N.H.
McFarland, L., Maine
Merrill, Geo. F., No. Hampton, N. H.
Merrill, Hayden A., Dedham
Mills, R. P., Abbott, Col.
Mitchell, Charles, Milton
Mitchell, Seth, Boston
Moulton, Beverly S., Boston
Nelson, D. Oscar, Portsmouth, O.
Nichols, Albert, Chicago, Ill.
Nichols, D. P., Boston
Noyes, A. P., Lowell
Ordway, G. W., Manch'r, N.H.
Page, Adino, Metamora, Ill.
Page, Nathan jr., Wakefield
Palmer, Charles L., Cotton Wood, Idaho Co., Idaho
Palmer, Frank H., N. Weymouth, Mass.
Patch, A. H., Clarkville, Tenn.
Payson, Samuel F., New York
Perry, George S., Brattleboro, Vt.
Phelps, N. L., Iowa
Phillips, A. P., Medfield
Phillips, Samuel, Brighton
Pierce, William, Boston
Poor, Henry, New York
Porter, Dudley H., Saratoga
Pratt, S. S., Revere
Putnam, Benjamin C., Chelsea
Putnam, Moses W., Phila., N. Y.
Raymond, Samuel, New York
Rea, Loring B., Miles City, Mont.
Reynolds, W. B., Derry, N. H.
Robinson, John L., Manchester, N. H.
Rogers, Isaiah S., Somerville
Rogers, Benjamin, Malden
Rogers, William, Illinois
Safford, N. T., Dunbarton, N.H.
Sargent, Elmer P., Malden
Sargent, G. P., Philadelphia, Pa.
Shattuck, Chas. W., Winchester
Shattuck, L. P., Boston
Sleeper, S. C., Plaistow, N. H.
Smith, Beaman C., Charlestown
Smith, George J., Boston
Spofford, Farnham, Washington
Spring, J. E., Brooklyn, N. Y.
Stanley, Samuel S., Boston
Stanwood, Joseph T., Malden
Stickney, Charles, Fon du Lac, Wis.
Stickney, Niles T., Chicago, Ill.
Stone, Edwin M., Prov. R. I.
Tappan, S. B., Arlington
Taylor, George H., Everett
Titcomb, Charles A., Boston
Trask, Alfred M., Brockton
Walker, Dexter M., Boston
Ward, Winsor M., Wakefield
Ware, Darwin E., Boston
Webb, Michael, jr., Cambridge
Wentzel, David, Amherst
Wheeler, H. T., Worcester
Whitman, F. A., Lexington
Whittemore, Chas. A., Boston
Whittemore, J. R., Chicopee
Wilder, S. W., Lowell

Total number, December, 1892—1386 resident members, 140 non-resident members. Grand total, 1526 members.

List of Premiums Awarded 1892.

FAT CATTLE.

Shattuck Brothers, Lawrence, for oxen, first premium, $8 00
J. P. Little, Amesbury, for oxen, second premium, 6 00
J. P. Little, Amesbury, for fat ox, first premium, 7 00
James C. Poor, No. Andover, for fat cow, second premium, 5 00

BULLS.

J. D. W. French, No. Andover, best bull of any age or breed, with five of his stock, Diploma and 10 00
J. D. W. French, No. Andover, bull calf, first premium, 2 00
E. C. Little, Haverhill, Holstein bull, first premium, 8 00
Plato Eames, Andover, Jersey bull, first premium, 4 00
F. H. Foster, Andover, Guernsey bull, first premium, 8 00
J. D. W. French, No. Andover, Ayshire bull, first premium, 4 00
E. C. Little, Haverhill, Jersey bull calf, first premium, 2 00
S. S. Lewis, Lawrence, Yearling Jersey bull, first premium, 4 00
James C. Poor, No. Andover, Holstein bull calf, first premium, 2 00

MILCH COWS.

J. D. W. French, No. Andover, Ayshire cow, first premium, 15 00
J. D. W. French, No. Andover, Ayshire cow, first premium, 10 00
J. F. Gulliver, Andover, Jersey cow, first premium, 10 00
J. F. Gulliver, Andover, Jersey cow, for most butter in one week, first premium, 10 00
James C. Poor, No. Andover, Holstein cow, first premium, 10 00
James C. Poor, No. Andover, grade cow, second premium, 4 00

James C. Poor, No. Andover, Holstein cow, first premium, 10 00

HERDS OF MILCH COWS.

Leverett Swan, Methuen, five grade cows, first premium, 18 00

J. D. W. French, No. Andover, five Ayshire cows, second premium, 12 00

HEIFERS PURE BRED.

J. D. W. French, No. Andover, Ayshire, first premium, 9 00

J. D. W. French, No. Andover, Ayshire, second premium, 4 00

J. D. W. French, No. Andover, Ayshire, first premium, 5 00

E. C. Little, Haverhill, Holstein, first premium, 5 00

M. H. Connor, West Newbury, Ayshire, first premium, 5 00

J. F. Gulliver, Andover, Jersey, first premium, 5 00

J. F. Gulliver, Andover, Jersey, second premium, 6 00

S. S. Lewis, Lawrence, Holstein, first premium, 5 00

S. D. Weston, Middleton, Jersey calf, first premium 5 00

James C. Poor, No. Andover, Holstein, first premium, 5 00

HEIFERS NATIVE OR GRADE.

J. D. W. French, No. Andover, grade Ayshire, second premium, 4 00

J. D. W. French, No. Andover, grade Jersey, second premium, 4 00

Daniel G. Carlton, No. Andover, grade Holstein, second premium, 4 00

George Ripley, Andover, grade Jersey, first premium, 5 00

George L. Burnham, No. Andover, grade Holstein, second premium, 6 00

Plato Eames, Andover, grade Holstein, first premium, 5 00

W. S. Hughes, No. Andover, grade Jersey, first premium, 5 00

James C. Poor, No. Andover, grade Holstein, first premium, 9 00

WORKING OXEN AND STEERS.

J. P. Little, Amesbury, for steers, first premium, $10 00
B. H. Farnham, No. Andover, for oxen, first premium, 12 00
Daniel A. Carleton, No. Andover, for oxen, second premium, 10 00
Wm. P. Christopher, Middleton, for oxen, third premium, 8 00

TOWN TEAMS.

North Andover Town Team, 13 pr. horses, first premium, 20 00

STEERS.

Wm. P. Christopher, Middleton, 3 year old steer, second premium, 6 00
Daniel Ingalls, No Andover, yearlings, first premium, 5 00
B. W. Farnham, No. Andover, steer calves, first premium, 4 00

STALLIONS FOR DRIVING.

Joseph Stowell, Lawrence, stallion, "Creditor," with 5 of his stock, Diploma and 15 00
Edward J. Castle, Lawrence, bay stallion, first premium, 10 00
A. J. Connor, Lawrence, black stallion, third premium, 4 00
Mrs. J. J. Downing, Andover, black stallion, first premium, 8 00
Rufus Goodwin, Haverhill, black stallion, second premium, 5 00
W. S. Messerve, Haverhill, brown stallion, second premium, 6 00

BROOD MARES —FARM PURPOSES.

Leverett Swan, Methuen, brood mare, first premium, 10 00
John H. George, Methuen, chestnut mare, second premium, 6 00
S. F. Newman, Newbury, brood mare, third premium, 4 00

BROOD MARES FOR DRIVING PURPOSES.

J. G. McAllister, Lawrence, bay mare, first premium, 10 00

J. B. Parkhurst, Boxford, brood mare, second premium, 6 00
Arthur H. Messerve, No. Andover, brood mare, third premium, 4 00

FAMILY HORSES.

M. C. Andrews, Andover, "Princess," first premium, 10 00
M. H. Connor, West Newbury, "Nelly," second premium, 6 00
J. M. Smith, Lawrence, third premium, 4 00

GENTS' DRIVING HORSES.

E. L. Barnes, Methuen, first premium, 10 00
Isaac C. Brown, Methuen, second premium, 6 00
Geo. L. Burnham, No. Andover, third premium, 4 00

SINGLE FARM HORSES.

Michael Dwyer, Methuen, Percheron mare, first premium, 10 00
John H. Perkins, Lynnfield, bay mare, second premium, 6 00
M. H. Poor, West Newbury, third premium, 4 00
J. D. W. French, No. Andover, first premium, 10 00
Fred Symonds, No. Andover, second premium, 6 00
Richard Newell, West Newbury, third premium, 4 00

PAIRS OF FARM HORSES.

George E. Kline, Lawrence, first premium, 10 00
Carlton Little, Newbury, second premium, 8 00
Mrs. J. J. Downing, Andover, first premium, 10 00
James C. Poor, No. Andover, second premium, 8 00

COLTS FOR FARM PURPOSES.

John H. George, Methuen, yearling, first premium, 6 00
Woodbury Smith, Rowley, 2 yr. old, second premium, 5 00
E. C. Little, Haverhill, third premium, 3 00
P. Averill, Lawrence, second premium, 3 00
John Barker, No. Andover, 2 yr. old. first premium, 8 00
R. T. Jaques jr., Newbury, first premium, 8 00
M. H. Connor, West Newbury, second premium, 5 00

COLTS FOR GENERAL PURPOSES.

Alfred Thorpe, Methuen, 4 yr. old, first premium,	8 00
John H. Perkins, Lynnfield, 3 yr. old, first premium,	6 00
J. G. McAllister, Lawrence, 3 yr. old, second premium,	3 00
M. H. Connor, West Newbury, 4 yr. old, second premium,	5 00
Woodbury Smith, Rowley, 2 yr. old, first premium,	8 00
Charles W. Mann, Methuen, second premium,	5 00
J. H. Nason, Boxford, third premium,	3 00
G. H. Hanscom, Haverhill, first premium,	5 00
E. C. Little, Haverhill, second premium,	3 00

SWINE.

Isaac C. Brown, Methuen, Yorkshire boar, second premium,	5 00
Isaac C. Brown, Methuen, Chester pigs, second premium,	5 00
W. L. Hill, Peabody, Chester white boar, second premium,	5 00
W. L. Hill, Peabody, breeding sow, second premium,	5 00
W. L. Hill, Peabody, Yorkshire sow, first premium,	8 00
Richard Newell, West Newbury, weaned pigs, first premium,	8 00
A. G. Playdon, Andover, sow and pigs, first premium,	8 00
J. G. McAllister, Lawrence, Chester white boar, first premium,	8 00
M. B. Chesley, Amesbury, breeding sow, first premium,	8 00
M. B. Chesley, Amesbury, Cheshire sow, second premium,	5 00
M. B. Chesley, Amesbury, Cheshire pigs, first premium,	8 00
M. H. Gould, Andover, Cheshire boar, first premium,	8 00
J. D. W. French, No. Andover, small Yorkshire sow and pigs, first premium,	8 00
J. D. W. French, No. Andover, small Yorkshire boar, first premium,	8 00

SHEEP.

Richard Newell, West Newbury, 10 grade Southdown ewes, first premium,	10 00

J. D. W. French, No. Andover, Oxfordshire buck, first premium, 8 00

J. D. W. French, No. Andover, 10 grade Shropshire ewes, second premium, 6 00

PLOUGHING WITH DOUBLE TEAM.

J. P. Little, Amesbury, first premium, 10 00

B. H. Farnham, No. Andover, second premium, 8 00

PLOUGHING WITH SINGLE TEAM.

Wm. P. Christopher, Middleton, first premium, 10 00

PLOUGHING WITH HORSES.

Carlton Little, Newbury, first premium, 10 00

Moses H. Poor, West Newbury, second premium, 7 00

E. C. Little, Haverhill, third premium, 5 00

PLOUGHING WITH OXEN, SWIVEL PLOUGH.

Lyman S. Wilkins, Topsfield, second premium, 8 00

Daniel A. Carlton, No. Andover, first premium, 10 00

PLOUGHING WITH HORSES, SWIVEL PLOUGH.

F. A. Russell, Methuen, first premium, 10 00

Isaac C. Brown, Methuen, second premium, 8 00

PLOUGHING WITH THREE HORSES.

M. H. Connor, West Newbury, first premium, 10 00

PLOUGHING WITH SULKY PLOUGH.

F. A. Russell, Methuen, first premium, 10 00

George E. Kline, Lawrence, second premium, 8 00

GRAIN CROPS.

Henry M. Killam, Boxford, crop of corn, first premium, 10 00

Chas. A. Andrews, Boxford, crop of corn, second premium, 5 00

C. K. Ordway & Son, West Newbury, crop of oats, first premium, 10 00

C. K. Ordway & Son, West Newbury, crop of hay, first premium, 10 00

M. H. Connor, West Newbury, crop of rye, first premium, 10 00

Hartwell B. Abbott, Andover, crop of rye, first premium, 5 00

ROOT CROPS.

C. C. Blunt, Andover, crop of English turnips, first premium, 10 00
C. C. Blunt, Andover, crop of parsnips, first premium, 10 00
C. C. Blunt, Andover, crop of carrots, second premium, 5 00
Kent & Marsh, Newburyport, crop of onions, first premium, 10 00
John H. George, Methuen, crop of onions, second premium, 5 00
E. C. Little, Haverhill, crop of potatoes, first premium, 10 00
J. Henry Nason, Boxford, crop of potatoes, second premium, 5 00
Daniel A. Carlton, No. Andover, crop of cabbages, first premium, 10 00
Walter Smith, Methuen, crop of cabbages, second premium, 5 00
E. C. Little, Haverhill, crop of mangolds, first premium, 10 00

SMALL FRUITS.

J. Webb Barton, Danvers, crop of strawberries, first premium, 10 00

ESSAYS AND REPORTS.

Dr. Chas. W. Page, Danvers, Essay and tabulated statement of product of milk of Asylum farm, 25 00
Jas. J. H. Gregory, Marblehead, report on Agricultural Implements, 10 00
J. W. Goodell, Lynn report on grapes, peaches and assorted fruit, 8 00

OTHER AWARDS.

Awarded by Committee on Granges, 100 00
" " " " Poultry, 101 00
" " " " Harrows, 10 00
" " " " Agricultural Implements, 32 00
" " " " Dairy, 34 00
" " " " Carriages, 23 00

Awarded by Committee on Bread and Canned Fruit,			25	00
"	"	" Pears,	68	00
"	"	" Apples,	70	50
"	"	" Peaches, Grapes, etc.,	39	50
"	"	" Plants,	16	00
"	"	" Flowers,	78	25
"	"	" Vegetables,	169	50
"	"	" Forest Trees,	30	00
"	"	" Grain and Seed,	25	00
"	"	" Counterpanes and Afghans,	24	75
"	"	" Carpets and Rugs,	21	00
"	"	" Manufactures from Leather,	19	00
"	"	" Manuf. and General Mdse..	17	25
"	"	" Fancy Work,	42	75
"	"	" Art Work,	50	00
"	"	" Work by Children,	9	00
"	"	" Experiment with Manures,	10	00

RECAPITULATION.

Awarded for Ploughing,			$114 00
	FARM STOCK.		
Awarded for	Fat Cattle,	26 00	
" "	Bulls,	44 00	
" "	Milch Cows,	69 00	
" "	Herds of Milch Cows,	45 00	
" "	Heifers,	96 00	
" "	Working Oxen and Steers,	40 00	
" "	Steers,	15 00	
" "	Town Teams,	20 00	
" "	Horses,	288 00	
" "	Swine,	97 00	
" "	Sheep,	24 00	
" "	Poultry,	101 00	
			865 00
	FIELD AND EXPERIMENTAL CROPS.		
Awarded for	Grain Crops,	50 00	
" "	Root Crops,	80 00	
" "	Fruit Crops,	10 00	
			140 00
	FARM AND GARDEN PRODUCTS.		
Awarded for	Grain and Seed,	25 00	
" "	Vegetables,	169 50	
" "	Fruits,	178 00	
" "	Plants and Flowers,	94 25	
			466 75
	DAIRY PRODUCT.		
Awarded for	Butter,	28 00	
Dressed Poultry and Eggs,		6 00	
			34 00

DOMESTIC MANUFACTURES.

Awarded for	Bread, Canned Fruit, etc.,	25 00	
" "	Counterpanes and Afghans,	24 75	
" "	Carpetings and Rugs,	21 00	
" "	Articles Manuf. from Leather,	19 00	
" "	Manufactures and Gen. Mdse.	17 25	
" "	Fancy Work,	42 75	
" "	Work of Art,	50 00	
" "	Children's Work,	9 00	
			208 75

MISCELLANEOUS.

Awarded for	Agricultural Implements,	42 00	
" "	Carriages,	23 00	
" "	Forest Trees,	30 00	
" "	Granges,	100 00	
" "	New Members,	6 00	
" "	Essays, Reports, etc.,	43 00	
" "	Experiment with Manures,	10 00	
			254 00

TOTAL.

The amount of $2081. 50 was awarded to 395 individuals and firms, in 27 different cities and towns in the county as follows:

Amesbury,	$73 75	Methuen,	$232 75
Andover,	217 25	Marblehead,	33 50
Beverly,	10 00	Middleton,	38 00
Boxford,	97 50	Newbury,	91 00
Danvers,	53 00	Newburyport,	32 50
Georgetown,	5 00	North Andover,	432 50
Gloucester,	2 00	Peabody,	44 75
Groveland,	12 50	Rockport,	2 00
Haverhill,	73 50	Rowley,	25 00
Lawrence,	342 50	Salem,	3 00
Lynn,	72 00	Saugus,	13 00
Lynnfield,	12 00	Swampscott,	3 00
Merrimac,	5 00	Topsfield,	31 50

West Newbury, $123.00

FINANCIAL STATEMENT.

Receipts for Admission to Hall,	$1083 00	
" " " " Dinner,	154 00	
" " Grounds for various purposes,	141 55	
" from Electric R. R. Co.	50 00	
		$1428 55
Expenses, including Tent-hire, Halls and Dinner,		1108 03
Amount paid Treasurer,		$320 52

1893.

PREMIUM LIST OF

Essex Agricultural Society,

FOR THE

SEVENTY-THIRD ANNUAL CATTLE SHOW AND FAIR,

To be held at Haverhill.

Duties of Trustees.

The trustee of each town is instructed to see the several members of Committees in his town previous to the Show, and urge upon them the importance of attending to their duties. Also impress upon exhibitors from localities near to the Exhibition, the importance of entering their exhibits for the hall, the afternoon and evening of Monday, in fairness to those from a distance, who are obliged to come Tuesday.

To be prompt at the meeting in June for filling Committees, and at the meeting of the Society for filling vacancies in committees on the first day of the Exhibition, making sure that the names proposed at those meetings are of persons who will serve.

Duties of Committees.

Committees on live stock and articles exhibited on the Fair Grounds should appear at the Secretary's office on the grounds, at one o'clock, punctually, on the first day of the exhibition, and there organize, take the books of entry, and proceed at once to business. Committees in hall, should take the books of entry from the Superintendent, promptly after the entries close.

Full reports of awards by committees, on the blanks furnished by the Secretary, to be signed by all the members acting on the same, are required of each committee.

Three members of any committee consisting of more than that number are authorized to act.

☞No member of the Society shall act on any committee of which he is an exhibitor in the same class.

The Diploma of the Society being considered the highest premium that can be awarded, no committee is authorized to award it, except for animals and articles *of special merit*, deserving of indorsement and recommendation by the Society.

No committee is authorized to award gratuities, except the committee on agricultural implements, carriages, bread, honey, and canned fruits, domestic manufactures, fruits, vegetables in hall, and flowers; or any premium, unless the rules of the Society have been strictly complied with. Neither shall they award premiums or gratuities in excess of the amount appropriated.

No gratuity is to be awarded of less than fifty cents.

The several committees are requested to affix premium cards, and also on animals, blue, white, and red printed premium ribbons (which may be had of the Secretary or assistant on the grounds and at the hall), for the several animals or articles designating the grade of premium awarded each, and the name of the person to whom awarded, and special care should be taken that the cards issued correspond with the awards in their report to the Society.

The reports of awards of premiums on ploughing and on animals and articles exhibited at the Show, must be delivered promptly to the Secretary for announcement on Thursday.

The Society offers liberal premiums for the best reports of committees; and the chairman of the several committees are requested to present to the Secretary a full report explanatory of the opinions of the committee on the matter referred to them, within two weeks after the awards are made at the Show, for publication in the Transactions.*

Reports on farms, crops, etc., to be presented previous to the meeting of the Trustees in November.

Any member of a committee who cannot serve on the same *is requested to give notice* to the Secretary, *before the Show*, so that the vacancy may be filled.

Each member of the several committees will receive a ticket of admission to the hall of exhibition, on application to the Secretary.

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*Chairmen of committees will please notice this request.

General Rules.

Competitors are requested to carefully read the rules and premium list before making entries.

Claims (entries) for premiums to be awarded at the Exhibition on the Fair Grounds,) other than live stock, must be entered with the Secretary of the Society, or his agent, and in the Exhibition Hall, on or before 11 A. M., of the first day thereof.

All entries of live stock must be entered with the Secretary at least one week previous to the holding of the Fair, and no entries will be received after that date.

Any person *not a member of the Society*, awarded seven dollars and upwards, shall receive a certificate of membership, for which three dollars of his award will be taken to increase the funds of the Society.

Diplomas awarded will be delivered and premiums paid, to the person to whom the premium or gratuity is awarded, or an agent duly authorized, on application to the Treasurer, at First National Bank, Salem, on and after the fourth Monday of November.

All premiums and gratuities awarded, the payment of which is not demanded of the Treasurer on or before the first day of September next succeeding the Exhibition, will be considered as given to increase the funds of the Society.

In all cases the reports of awards of premiums and gratuities made by the several committees and adopted by the Society shall be final. *Committees should see that the premium cards issued, correspond with the premiums and gratuities awarded in their reports.*

No person shall be entitled to receive a premium, unless he complies with the conditions on which the premiums are offered, and by proper entry as required, gives notice of his intention to compete for the same; and committees are instructed to award no premium unless the animal or article offered is worthy.

No animal or object that is entered in one class, with one committee shall be entered in another class, except town teams, fat cattle, working oxen, working steers, and farm horses, which may be entered for ploughing, and milch cows, which may be entered with a herd.

In regard to all subjects for which premiums are offered it is to be distinctly understood that the Trustees reserve to themselves the right of judging the quality of the animal or article offered; and that no premium will be awarded unless the objects of them are of decidedly superior quality.

Pure Bred Animals, defined by the State Board of Agriculture.

The proof that an animal is so bred should be a record of the animal or its ancestors, as recorded in some herd book, recognized by leading breeders and the public generally, as complete and authentic.

Standards adopted:—American Jersey C. C. Register and American Jersey Herd Book, Ayrshire Record and Holstein Herd Book.

Premiums to be Awarded at the Show.

The Committees will take notice that no premium will be awarded unless the animals or objects are of a decidedly superior quality.

DIPLOMAS may be awarded for ANIMALS OR ARTICLES of *special* merit, in all departments of the Fair.

Cattle and other Farm Stock.

TO BE ENTERED IN THE NAME OF THEIR REAL OWNER.

All animals to be eligible to a premium, shall have been raised by the owner within the County, or owned by the exhibitor within the County, four months previous to the date of Exhibition, except Working Oxen, and Working Steers.

All animals, whether teams for ploughing, or animals entered for premium or exhibition, will be fed during the Exhibition, and longer when they are of necessity prevented from leaving, at the expense of the Society.

FAT CATTLE.

Fat cattle, fatted within the County, regard being had to manner of feeding, and the expense thereof, all of which shall be stated by the exhibitor in writing, and returned to the Secretary, with committee's report.

For Pairs of Fat Cattle, premiums, $8, 6, 3
For Fat Cows, premiums, $7, 5

BULLS.

*Ayrshire, Jersey, Short Horn, Devon, Holstein, Guernsey or of any other recognized breed, for each breed.

Two years old and upwards, premiums, $8, 4
Under two years, for each breed, $4, 3
Bull Calves under one year old, premium for each breed, $2

BULLS OF ANY AGE OR BREED.

For the best bull of any age or breed, with five of his stock not less than one year old, quality and condition to be taken into account, and especially the adaptability of the animal to the agriculture of the County. Diploma and $10

NOTE.—Competitors are required to give a written statement of pedigree, and committees are requested to be particular in this respect, and return them to the Secretary with report.

MILCH COWS.

For the best Milch Cow any age or breed, with satisfactory record in quarts or pounds by her daily yield of milk for one or more years, premium, $15

For Milch Cows, either Foreign, Native or Grade, not less than four nor more than ten years old, with satisfactory evidence as to quantity and quality of milk by weight during one full month, premiums, $10, 4

Milch Cows, Ayrshire, Jersey, Devon, Short Horn, Holstein, Guernsey, or any other recognized breed, four years old and upwards, premiums, for each breed, $10, 4

For Native or Grade Cows, four years old and upwards, premiums, $10, 4

For the Cows that make the most butter in any single week from June 1st to September 15th, premiums, $10, 4

NOTE.—A written statement will be required of the age and breed of all Milch Cows entered, and time they dropped their last calf, and when they will next calve, the kind, quality and quantity of their food during the season, and the manner of their feeding, which statement is to be returned to the Secretary with Committee's report.

HERDS OF MILCH COWS.

For herds of Milch Cows, not less than five in number, to be exhibited at the Show, and a correct statement of manner of keeping and yield for one year preceding the Show, premiums, $18, 12

For the greatest produce of milk on any farm, in proportion to the number of cows producing it, not less than four, from April 1, 1889 to April 1, 1890, statement to be made of the exchanges made, manner, and expense of food, use made of milk, and such other facts as will illustrate the entire managament, special regard being had to the mode in which the account is kept, premium,

Diploma and $15

NOTE.—The above-mentioned statements are to be returned to the Secretary with Committee's report. The Committee can accept statements dating from January 1st, preceding the Show.

HEIFERS.

FIRST CLASS.—Ayrshire, Jersey, Short Horn, Devon, Holstein, Guernsey, or any other recognized breed, under four years old in milk, premiums, for each breed, $9, 6

Two years old of each breed, that have never calved, premiums, $5, 4

One year olds of each breed, premiums, $5, 4

Heifer Calves, under one year, premiums for each breed, $5 4

SECOND CLASS.—Native or Grade Milch, under four years old, premiums, $9, 6

Two year olds, that have never calved, premiums, $5, 4

One year olds and less than two, premiums, $5, 4

Heifer calves, Native or Grade, under one year old, premiums, $5, 4

WORKING OXEN AND STEERS.

Stags excluded. For pairs of Working oxen under eight and not less than five years old, taking into view their size, power, quality and training, premiums, $12, 10, 8

For pairs of Working Steers, four years old, to be entered in the name of the owner, premiums, $10, 6

NOTE.—The Committee are required to consider the quality and shape of the cattle as well as their working capacity. The training of working oxen and steers will be tested by trial on a cart or wagon containing a load weighing two tons for oxen, and 3000 pounds for steers. ☞At the time of entry a certificate of the weight of the cattle must be filed with the Secretary.

TOWN TEAMS.

For Town Teams of Oxen, ten yoke or more in a team, premiums, $20, 12

For Town Teams of Horses, ten or more pairs in a team, premiums, $20, 12

FARM TEAMS.

For the best Farm Team of not less than two Pairs of Oxen, or two pairs of Horses, owned and used on one farm, premiums, $5, 3

STEERS.

For pairs of three year old Steers, broken to the yoke, premiums, $8, 6

For pairs of two year old Steers, premiums, $6, 5

For pairs of yearling Steers, premiums, $5, 4

For pairs of Steer Calves, premiums, $4, 2

STALLIONS.

FIRST CLASS.—For Stallions for Farm and Draft purposes, four years old and upwards, diploma or premiums, $10, 6, 4

For Stallions for Farm and Draft purposes, three years old, premiums, $8, 5

For best Stallion of any age, and five colts of his stock, not less than one year old, quality and condition to be taken into account, Diploma and $15

SECOND CLASS.—For Stallions for Driving purposes, four years old and upwards, premiums, $10, 6, 4

For Stallions for Driving purposes, three years old, premiums, $8, 5

For best Stallion of any age and five colts of his stock, not less than one year old, quality and condition to be taken into account, Diploma and $15

NOTE.—No Stallion will be entitled to a premium unless free from all apparent defects capable of being transmitted. All Stallions entered in either class must have been owned by the exhibitor four months previous to the exhibition.

BROOD MARES.

FIRST CLASS.—For Brood Mares for Farm and Draft Purposes, with their foal not more than eight months old, by their side, premiums, $10, 6, 4

SECOND CLASS.—For Brood Mares for Driving purposes, with their foal not more than eight months old, by their side, premiums, $10, 6, 4

NOTE.—No brood mare will be entitled to a premium unless free from all apparent defects capable of being transmitted.

FAMILY HORSES.

For Family horses, premiums, $10, 6, 4

NOTE.—No horse will receive a premium unless free from all unsoundness.

GENTLEMEN'S DRIVING HORSES.

For Gentlemen's Driving Horses, premiums, $10, 6, 4

FARM HORSES.

For Farm Horses, weighing 1200 lbs. and over, premiums, $10, 6, 4

For Farm Horses weighing less than 1200 lbs., premiums, $10, 6, 4

NOTE.—No horse will be allowed except those actually used on farms, whether the owner has a farm or not. The weight of load to be used in trial of Farm Horses is to be fixed upon by the committee of arrangements for drafting, the difference in the load for horses of 1200 lbs. and over, and those under 1200 lbs. to be 1000 lbs., and between the two classes of pairs, 2000 lbs. No obstruction shall be placed either before or behind the wheels in trials of Draft Horses of either class. But wheels to be trigged to hold the load when they stop on a hill. If this rule is not compiled with, the premiums shall be withheld.

PAIRS OF FARM HORSES.

FIRST CLASS.—For pairs of Farm Horses, weighing 2500 lbs. and upwards, (see above note) premiums, $10, 8

SECOND CLASS.—For pairs of Farm Horses, weighing less than 2500 lbs. (see above note) premiums, $10, 8

COLTS FOR DRAFT PURPOSES.

FIRST CLASS.—For Mare or Gelding four year old Colts, premiums, $8, 5, 3

For Mare or Gelding three year old Colts, premiums, $6, 3

SECOND CLASS.—For Stallion, Gelding or Mare, two year old Colts, premiums, $8, 5, 3

For Stallion, Gelding or Mare, yearling Colts, premiums, $5, 3

COLTS FOR DRIVING PURPOSES.

FIRST CLASS.—For Mare or Gelding four year old Colts, premiums, $8, 5, 3

For Mare or Gelding three year old Colts, premiums, $6, 3

SECOND CLASS.—For Stallion, Gelding or Mare, two year old Colts, premiums, $8, 5, 3

For Stallion, Gelding or Mare yearling Colts, premiums, $5, 3

SWINE.

FIRST CLASS.—Large breeds, viz: Cheshire, Berkshire, Chester County White, Poland China, Large Yorkshire, and any other breed or grade weighing more than 300 lbs. at maturity.

For Boars, premiums, $8, 5

For Breeding Sows, with their pigs by their side, premiums, $8, 5

For Litters of Weaned Pigs, not less than four, between two and four months old, premiums, $8, 5

SECOND CLASS.—Small breeds, such as Suffolk, Essex, Small Yorkshire, China, and any other breed or grade weighing less than 300 lbs. at maturity.

For Boars, premiums, $8, 5

For breeding Sows, with their pigs by their side, premiums, $8, 5

For Litters of Weaned Pigs, not less than four, between two and four months old, premiums, $8, 5

SHEEP.

For flocks of Sheep not less than ten in number.

For each Breed, premiums, $10, 6

For best Buck, premium, $8

For lots of Lambs, not less than four in number, between four and twelve months old, premiums, $6, 4

POULTRY.

For pairs of Fowls, Light Brahmas, Dark Brahmas, Buff Cochins, Partridge Cochins, Black Cochins, White Cochins, Plymouth Rocks, White Plymouth Rocks, Dominiques, White Leghorns, Brown Leghorns, Dominique Leghorns, Black Spanish, Hamburgs, Polish, Games, Dorking, Bantams, Black, White and Mottled Javas, Wyandottes, White Wyandottes, Golden Wyandottes, Black and White Minorcas, Red Caps, Andalusias, Langshangs, and other recognized varieties, each variety, premiums, $2, 1

For pairs of Chickens of above varieties, premiums, $2, 1

For the best breeding pen of each variety—Diploma of the Society.

For the best pairs of Native Fowls, premiums, $2, 1

Pairs can be exhibited in "breeding pens," by marking the competing female (with a ribbon or colored string), which, with the male will form the pair.

For lots of Turkeys, and Alesbury, Rouen, Caouga, Pekin, White and Colored Muscovey, and Brazilian Ducks, and Toulouse, Emden, Brown Chi a, and African Geese, premiums, $2, 1

For 10 or more Fowls exhibited, whether thoroughbreds, crossed or mixed, with an account for one year, showing cost and method of keeping, production and profit, premiums, $8, 6, 5

As above, with an account for six months, premiums, $5, 3, 2

Any exhibitor interfering with the Judges in the discharge of their duties or interfering with, or handling any specimen on exhibition, other than his own, shall forfeit all claim he may have in the premium list.

All breeds exhibited separately and to be judged by the rules of the "American Standard of Excellence."

For best exhibit of Poultry Appliances, $5

PLOUGHING.

General Note on Ploughing.—Stags are excluded. Teams must be entered in the names of their owners, and only double ox-teams to have drivers. A team consisting of one pair of oxen and a horse will be considered a double team. The owners of separate teams may unite the same and be allowed to compete for premiums. The ploughmen and drivers must have been residents of the County at least three months before the exhibition. Those who intend to be competitors must give notice to reach the Secretary on or before Saturday previous to the show. The lands will be staked, but each ploughman will be required to strike out his own lands in the presence of the "Committee on Striking out grounds for Ploughing," after half past nine o'clock in the morning of the trial. Ploughmen with land side ploughs are to back furrow three furrows on each side of the stakes set, the last furrow to be of the depth required in the class. Ploughmen, with swivel ploughs to turn the outside of their furrow to the stakes on one side, and to finish one foot from the stake on the other. Committees to note and report the kind of plough used.

Ploughing with Double Teams.—One-eighth of an acre, at least eight inches deep, premiums, $10, 8, 6

Ploughing with Single Teams.—One-eighth of an acre, at least six inches deep, premiums, $10, 8, 5

Ploughing with Horses.—With any form of Plough, except Swivel, one-eighth of an acre, at least six inches deep, premiums, $10, 7, 5

Ploughing with Three Horses.—One-eighth of an acre, eight inches deep, without driver, premium, $10

Same with four horses, with driver, premium, $10

Ploughing with Swivel Plough.—One-eighth of an acre, with double ox-teams, at least eight inches deep, premiums, $10, 8

Same with single ox-teams, at least six inches deep, premiums, $10, 8

Same with Horse Teams, consisting of two horses, ploughing at least six inches deep, premiums, $10, 8

Ploughing—Sulky Plough.—For the best performances,

taking into account ease of draft, amount and quality of work, premiums, $10, 8

HARROWS.

For the best Harrow exhibited, and its merits shown by actual test upon the ploughed ground, $10, 8

NOTE.—Entry must be made with the Secretary before the day of the trial with description of Harrow.

AGRICULTURAL IMPLEMENTS.

For the best collection of Implements and Machines (no article offered in *collection* will be entitled to a separate premium), Diploma and $10

Best Market Wagon, premium, $5
Best Farm Wagon, for one or two horses, premium, $3
Best Horse Cart, premium, $5
Best Hay, Straw or Corn Cutter, premium, $1.50
Best Ox Yoke, complete, premium, $1.50
Best Fruit Evaporator, with sample of work, premium, $5
Best set of Horse Shoes, including those for over-reaching, interfering and stumbling horses, premium, $5

For implements not specified above, the Committee may at their discretion award $40.

No premium or gratuity will be awarded for any Mower, Horse Rake, Tedder, or other Machine or Implement, the merit of which can be known only by actual trial in the field; but manufacturers are invited to offer the same for exhibition and inspection.

CARRIAGES.

For carriages built in the County, and exhibited by the manufacturer, Diploma, and thirty dollars in gratuities, may be awarded by the Committee.

In Exhibition Hall.

Committees on articles exhibited in the hall should be especially careful that the premium or gratuity cards issued with the names, and sums awarded them, correspond with those in their reports to the Society.

Committees and Exhibitors will be governed by instructions, under heading of "Duties of Committee," "General Rules," "Premiums to be awarded at the Show," see first pages, and under "Fruit," "Domestic Manufactures," and "Flowers."

☞All Fruit, Flowers, Vegetables, and Domestic Manufactures, must be the Product of Essex County, to be entitled to a premium or gratuity.

DAIRY.

For specimens of Butter made on any farm within the County the present year, samples of not less than five pounds to be exhibited, with a full account of the process of making and management of the Butter premiums. $8, 6, 4

For Specimens of New Milk Cheese, made on any farm in the County the present year, samples of not less than fifty pounds to be exhibited, with statement in writing of the method of making and preserving the same, premiums. $8, 6, 4

NOTE.—Each lot presented for premium and the statement accompanying it, must be numbered, but not marked so as to indicate the claimant; any public or known mark must be completely concealed; nor must the competitors be present at the examination.

To the person who shall furnish to the Society satisfactory evidence of the greatest quantity of Butter made from any quantity of milk, being the whole produce of any single cow, for the first week of June, July, August, and September next, stating the whole amount of Butter produced in each week, also the time when the cow dropped her last calf, and her feed and management all to be taken into account in making the award, premiums.

Diploma and $10, 5

NOTE.—The object in offering these last premiums is to elicit inquiry as to the value and quantity of milk for the production of butter. As far as practicable it is desirable that the race and pedigree of the cow shall be given.

DRESSED POULTRY AND EGGS.

For the best pair of dressed Fowls, Chickens, Ducks, and Geese, weight to be given, premium for each pair, $2

For the best 12 eggs from Asiatic, American, Game, French and Spanish classes (Hamburgs, Polish, Dorkings to compete in the Spanish class), premium for each class, $1

BREAD AND CANNED FRUIT.

For White Bread made of Wheat flour, premiums, $3, 2, 1

For bread made from Graham flour, premiums, $2, 1

For bread made from other grains, or other grains mixed with wheat, premiums, $1 50, 1

All bread, entered for premiums, to be in loaves weighing not less than one pound each, and to be not less than twenty-four hours old, with a full written statement over the signature and address of the maker, stating the kind of flour used, quantity of each ingredient, how mixed, and length of time kneaded and raised, and how long baked, *which statements on all premium bread are to be sent to the Secretary with report of the Committee for publication.*

For first and second best collection of Pickles, Preserved Fruits, and Jellies, made from products of the County, *when premiums are awarded, the method of making to be sent to the Secretary by the Committee, for publication*, premiums, $3, 2

For the first and second best five pounds of Dried Apples, grown and dried within the County, with statements of process used and amount of labor and time required in preparing and drying, *such statement on premium fruit to be given to the Secretary for publication*, premiums, $3, 2

In addition to the above, are placed in the hands of the Committee for gratuities on other articles entered in this department, products of this County, deemed worthy. $5

BEES, HIVES AND HONEY.

For first and second best display of Bees, Hives and Apiarian Implements, accompanied with a written description of the bees, hives, etc., number of hives in use and amount of surplus honey taken from them during the season, premiums, $5, 3

First and second best Honey, ten pounds in comb and one pound extracted, made in the County, with statement signed of kind of bees and hive, and time of year when honey was made, premiums, $3, 2

Fruit.

All fruit must be entered in the name of the grower before 11 o'clock on the first day of the exhibition, and each exhibitor must certify to the same on the Entry Book, or on lists of the varieties of each class of fruit, or be filed when entry is made. (Committees are not authorized to make awards to those who do not comply with this rule.)

Tables will be labelled in a *conspicuous manner* by the hall committee *before the entry of exhibitors*, with the names of fruit, for which premiums are offered, all others of same class fruit to be labelled miscellaneous. Exhibitors must place their several varieties of each class of fruit where indicated by such labels, or be considered by the committee as not competing for premium.

Plates of collections of fruit, when premiums are offered therefor, must be entered and placed by the exhibitor on the table assigned for the exhibit of collections of fruit.

To entitle exhibitors to receive premiums and gratuities awarded, they are required (when requested by the committee) to give information in regard to the culture of their fruit.

PEARS.

For best twelve specimens of the following varieties, which are recommended for cultvation in Essex County: Bartlett, Belle Lucrative, Bosc, Anjou, Angouleme, Dana's Hovey, Lawrence, Louise Bonne, Onondaga, Paradise d'Automne, Seckle, Sheldon, Urbaniste, Vicar, Comice, Howell, and Clairgeau, each, premium, $3

Doyenne d'Ete, Gifford and Clapp's Favorite (ripening early), are recommended for cultivation, but no premium is offered.

For each dish of twelve best specimens of any other varieties, deemed worthy by the committee, premium, $1.50

For best collection of Pears, recommended for cultivation, premium, $6

In addition to the above, are placed at the disposal of the committee, to be awarded in gratuities of not less than $1 each, $20

APPLES.

For best twelve specimens of the following varieties, which are recommended for cultvation in Essex County: Baldwin, Danvers Sweet, Tompkins King, Granite Beauty, Red Russet, Tolman's Sweet, Bailey Sweet, Drap d'Or, Hubbardston, Hurlburt, Porter,

Pickman Pippin, Roxbury Russet, Rhode Island Greening, Sweet Baldwin, Gravenstein, Hunt Russet, Smith's Cider, Snow, premium for each, $3

Red Astrachan, William's Favourite, Tetofsky and Sweet Bough are recommended for cultivation, and no premium is offered (ripening early).

For best twelve specimens of any other varieties deemed worthy by the committee, premium for each variety, $1.50

For best collection of Apples, recommended for cultivation, premium, $6

For best twenty-four specimens of any variety of Crab Apple deemed worthy by the committee, $1.50

In addition are placed at the disposal of the committee, to be awarded in gratuities of not less than $1 each, $20

PEACHES, GRAPES, AND ASSORTED FRUITS.

For best nine specimens of Freestone, White Flesh, Yellow Flesh, Essex County Seedling, each variety, $2

For best collection of Peaches, premium, $3

For Champion, Lemon, or Orange Quinces, premium, $3

For Plums, each variety, premium. $2

For best four bunches of Concord, Worden's Seedling, Brighton, Hartford Prolific, Delaware, Martha, Moore's Early, Niagara Grapes, each variety, premium. $3

For Cold House Grapes, produced with not over one month's artificial heat, premiums. $4, 3

For best collection of ten varieties, not less than ten pounds in all, premiums, $7

For best specimens of four bunches of Grapes, varieties other than above, deemed worthy by the committee, premium, $1.50

For baskets of Assorted Fruits, premiums, $4, 3

In addition are placed at the disposal of the committee, to be awarded in gratuities, of not less than 50 cents each, $25

PLANTS AND FLOWERS.

RULES AND REGULATIONS.

1. All Plants and Flowers for competition and exhibition must be entered for examination by the committee on or before eleven o'clock, on the first day of the Fair, and all such Plants and Flowers must have been grown by the competitor, except native plants and flowers, and flowers used in bouquets, and baskets of flowers and floral designs, all of which (plants and flowers) must have been grown within the County.

2. When a certain number or quantity of Plants and Flowers is designated in the schedule, there must be neither more nor less than that number or quantity of specimens shown.

3. When only one premium from each exhibitor is offered for any article, only a single specimen or collection can compete, but when a second or third premium is offered, one, two or three specimens or collections may be exhibited for competition, but no variety can be duplicated.

4. No premium shall be awarded unless the specimens exhibited are of superior excellence, possessing points of superiority and

worthy of such premium, not even if they are the only ones of their kind on exhibition.

5. No specimen entered for one premium shall be admitted in competition for another different premium.

6. Competitors will be required to furnish information (if the committee so request), as to their modes of cultivation, or in the case of Native Plants and Flowers, where such were found.

7. All plants exhibited for premiums must have the name legibly and correctly written on stiff card, wood, or some other permanent and suitable substance, and so attached to same as to be easily seen. Flowers when specified to be named to comply also with above rule.

8. Plants in Pots to be entitled to premiums must show skilful culture in the profusion of bloom and in the beauty, symmetry and vigor of the specimens ; also Bouquets, Baskets, Design Work, etc., must show taste, skill, and harmony in arrangement, both as to colors and material they are made of, and purposes for which they are intended.

9. All flowers exhibited must be shown upon their *own stem*, flowers in "Design" work alone excepted ; and this exception if overcome and avoided, to be taken into account by the committee in awarding the premiums.

10. The Committee are authorized to award gratuities for any new and rare plants and flowers or "Designs" of merit for which no premium is offered, but in no case shall the total sum (premiums and gratuities together), exceed the amount $150.00, limited by the Society for this department.

11. No member of the Committee for awarding premiums or gratuities shall in any case vote or decide respecting an award for which such member may be a competitor, or in which he may have an interest, but in such case such member shall *temporarily* vacate his place upon the Committee, and such vacancy for the time being may be filled by the remaining members of the Committee, or they may act without.

12. Attention is again called to above Rules and Regulations for Plants and Flowers, and General Rules of the Society, and all articles not entered in conformity therewith will be disqualified, and premiums will be awarded only to exhibitors who have complied with said Rules, etc.

PLANTS.

Plants competing for these premiums must have been grown in pots, Native Plants excepted, etc. See Rules.

For collections Flowering and Ornamental Foliage Plants, at least 25 specimens, premiums, $10. 5

For Collection Palms, at least 5 specimens, 5 varieties, premium, $1

For Collection Ferns (cultivated), at least 5 specimens, 5 varieties, premium, $1

For collection Dracenas, at least 5 specimens, 5 varieties, premium, $1

For collection Crotons, at least 5 specimens, 5 varieties, premium, $1

For collection Fancy Caladiums, at least 5 specimens, 5 varieties, premium, $1

For collection Gloxinias, at least 5 specimens, 5 varieties, premium, $1

For collection Begonias, tuberous rooted, at least 5 specimens, 5 varieties, premium,

For collection Begonias, 5 specimens, 5 varieties, premium, $1

For collection Coleus, 10 specimens, 10 varieties, premium, $1

For collection Fuschias, 5 specimens, varieties, premium, $1

For collection Cyclamen, 5 specimens, 5 varieties, premium, $1

For collection Geraniums, double, 10 specimens, 10 varieties, premium, $1

For collection Geraniums, single, 10 specimens, 10 varieties, premium, $1

For collection Geraniums, fancy, 10 specimens, at least 5 varieties, premium, $1

For collection Hibiscus, 5 specimens, 5 varieties, premium, $1

For collection Carnation Pinks, 10 specimens, at least 5 varieties, premium. $1

For collection Calla Lillies, 5 specimens, premium, $1

For specimen English Ivy, premium, $1

For collection of wood of native trees in sections, suitable for exhibition, showing bark and the grain of the wood, all correctly named with botanical and common name, at least 50 varieties, each variety to be shown in two sections, one of which to be a cross section and neither to be more than four inches in length or diameter, premiums, $5, 3

FLOWERS.

For collection Cut Flowers, cultivated, 100 specimens, at least 50 varieties, named, $5, 3

For collection of Cut Flowers, native, 100 specimens, at least 50 varieties, named, $5, 3

For pair of Bouquets, for vases, green-house flowers, prem., $2, 1

For pair of Hand Bouquets, green-house flowers, prem., $2, 1

For pair of Bouquets, for vases, of native flowers, prem., $2, 1

For pair of Bouquets, for vases, of garden flowers, prem., $2, 1

For Basket of green-house flowers, premiums, $2, 1

For Basket of Native Flowers, premiums, $2, 1

For Basket of Garden Flowers, premiums, $2, 1

For arrangement of Native Flowers and Autumn Leaves, premiums. $3, 2

For Floral Designs, choice cultivated flowers, premiums, $5, 3

For Floral Designs, native flowers, premiums, $3, 2

For collections Japan Lilies, hardy, named, premiums, $3, 2

For collections Phlox, hardy perennial, named, premiums, $2, 1

For collections Pansies, at least 50 specimens, neatly and artistically arranged, premiums, $2, 1

For collections of Native and Introduced Weeds, with common and botanical name attached, premiums, $3, 2

For twelve Dahlias, large flowering, at least six varieties, named, premium, $1

For twelve Dahlias, Pompon or Lilliputian, at least six varieties, named, premium, $1

For twelve Dahlias, single, at least six varieties, named, premium, $1
For twelve Petunias, double, at least six varieties, named, premium, $1
For twelve Gladiolus (spikes), at least six varieties, named, premium, $1
For twelve Japan Lilies, at least six varieties, named, prem., $1
For twelve Geraniums, double, at least six varieties, named, premium, $1
For twelve Geraniums, single, at least six varieties, named, premium, $1
For twelve Phlox, hardy perennial, at least six varieties, named, premium, $1
For twelve Cannas, at least six varieties, named, premium, $1
For twenty-four Carnation Pinks, at least six varieties, named, premium, $1
For twenty-four Verbenas, at least six varieties, named, premium, $1
For twenty-four Roses, at least six varieties, named, premium, $1
For twenty-four Garden Annuals, at least twelve varieties, named premium, $1
For twelve Calendulas, at least two varieties, named, prem., $1
For twelve Asters, Double Victoria, premium, $1
For twelve Asters, Double, Truffaut's Peony flowered, prem., $1
For twelve Asters, Pompone, premium, $1
For twelve Phlox Drummondii, in variety, premium, $1
For twelve Nasturtiums, at least six varieties, premium, $1
For twenty-four Pansies, in variety, premium, $1
For twenty-four Zinnias, double in variety, premium, $1
For twenty-four Marigolds, African, in variety, premium, $1
For twenty-four Marigolds, Dwarf French, in variety, prem., $1
For twenty-four Petunias, single, in variety, premium, $1
For display of Coxcombs, in variety, premium, $1
For twelve Scabiosas, in variety, premium, $1
For twelve Delphiniums, in variety, premium, $1
For twelve Dianthus (double, annual), in variety, premium, $1
For twelve Salpiglossis, in variety, premium, $1
For collection of Sweet Peas, premium, $1

VEGETABLES.

Rules for Fruit apply to Vegetables.

Beets—For best twelve specimens, Eclipse, Dewing, and Edmands, premiums, each variety, $3
Carrots—For best twelve, short top, long Orange and Danvers Intermediate, premium, each variety, $3
For best twelve, Short Horn Orange carrots, $3
Mangold Wurtzels—For best six specimens, premium, $3
Flat turnips—Twelve specimens. For best Purple Top and White Flat, premium, each variety, $3
Ruta Bagas—Twelve specimens. For best Yellow and White premium, each variety, $3
Parsnips—For the best twelve specimens, premium, $3
Onions—Twelve specimens. For best Danvers, Yellow Flat, and Red, premium, each variety, $3

Potatoes—Twelve specimens. For best Early Rose, Beauty of Hebron, Clark's No. 1, Pearl of Savoy, Early Maine, premium, each variety, $3

Cabbages—For best three specimens, Savoy, Fottler's Drumhead, Stone Mason Drumhead, Red Cabbage, All Seasons, Deep Head, each variety, premium, $3

For next best, each variety, premium, $2

Cauliflowers—For best three specimens, premium, $3

For next best, premium, $2

Celery—For best four roots, premium, $2

Sweet Corn—For twelve ears ripest and best Early, premium, $3

For best twelve ears in milk, Late, premium, $3

Squashes—For best three specimens, Marrow, American Turban, Hubbard, Marblehead, Essex Hybrid, Bay State, Sibley, Butman, each variety, premium, $3

Melons—For best three specimens, Nutmeg, Musk, Cassaba, Salmon Flesh, each variety, premium, $2

For best two specimens Watermelons, premium, $2

Tomatoes—For best twelve specimens, Acme, Emery, Cardinal, Essex Hybrid, Livingstone, or any other variety, each variety, premium, $3

For exhibition of greatest variety of Tomatoes, premium, $3

Cranberries—For pecks of cultivated, premiums, $3, 2, 1

For collection of vegetables, not less than three of a kind, premiums, $8, 6, 4, 2

Placed at the disposal of the committee for whatever appears meritorious, $30

☞No competitor for premium to exhibit more or less number of specimens of any vegetables than the premiums are offered for.

Collections of Vegetables where premiums are offered for a number of varieties must be entered and placed, not less than three of a kind, by themselves on the tables assigned for collections. No collection shall receive but one premium. Specimens of any varieties in such collections are not to compete with specimens of the same variety placed elsewhere. Exhibitors of such collections however, are not prevented from exhibiting *additional* specimens of any variety with and in competition with like variety. All vegetables must be entered in the name of the grower of them.

Size of Vegetables.—Turnip Beets to be from 2 to 4 inches in diameter; Onions, 2 1-2 to 4 inches in largest diameter; Potatoes to be of good size for family use; Squashes to be pure and well ripened, Turban, Marrow, Hubbard, Marblehead, all to be of uniform size.

GRAIN AND SEED.

For best peck of Shelled Corn, Wheat, Oats, Barley, Rye, Buckwheat, and Field Beans, each, premium, $1

For 25 ears of Field Corn, premiums, $5, 3, 2

For 25 ears of Pop Corn, premiums, $3, 2

For collections of Field and Garden Seeds, premiums, $8, 6, 4, 2

All grain or seed *must have been grown by the exhibitor in the County* to receive a premium.

Domestic Manufactures.

Contributors must deposit their articles at the Hall before 11 o'clock on the first day of the Exhibition. Articles not thus depos-

ited will not be entitled to a premium. Gratuities will be awarded for articles of special merit for which no premium is offered; but no premium or gratuity will be awarded for any article manufactured out of the County, or previous to the last exhibition of the Society.

COUNTERPANES AND AFGHANS.

For Wrought Counterpanes having regard to the quality and expense of the material, premiums, $4, 2

Gratuities will be awarded for articles belonging to this department, the whole amount of gratuities not to exceed $25

CARPETINGS AND RUGS.

For carpets, having regard to the quality and expense of the material, premiums, $4, 2

For Wrought Hearth Rug, having regard both to the quality of the work and expense of the materials, premiums, $3, 2

Gratuities will be awarded for articles belonging to this department, the whole amount not to exceed $25

ARTICLES MANUFACTURED FROM LEATHER.

For best pair hand made and machine made Men's Boots, Women's do., Childrens' do., each, premium, $2

Best Team, Carriage, and Express Harness, each, premium, $5

$10 are placed at the disposal of this committee, to be awarded in gratuities

For the best exhibition of Boots and Shoes, manufactured in the County, each, premium, Diploma of the Society.

MANUFACTURES AND GENERAL MERCHANDISE.

For display of Bonnets, premiums, $4, 3

For Horn Combs, not less than one dozen, premium, $2

At the disposal of the committee in this department, to be awarded in gratuities not exceeding $3 in any one gratuity, $20

FANCY WORK

Of Domestic Manufacture are not included in the above.

At the disposal of the committee in this department, to be awarded in gratuities not exceeding $3 in any one gratuity, $50

WORKS OF ART.

At the disposal of the committee in this department, to be awarded in gratuities not exceeding $3 in any one gratuity, $50

WORK BY CHILDREN.

For specimens of work performed by children under 12 years of age exhibiting industry and ingenuity, premiums, $3, 2

At disposal of committee to be awarded in gratuities, $10

List of Premiums to be Awarded by the Trustees in November.

FARMS.

Competitors for this premium must give notice of their intention to the Secretary on or before June 15th, and the farms entered for premium will be viewed by the committee twice during the year. Crops growing on farms that are entered for premium, cannot be entered with another committee for separate premiums—except crop specimens exhibited at the fair.

Any person desirous of having *his farm inspected, without entering it for premium*, may make application to the Secretary, and it will be viewed and reported upon by the committee.

For the best conducted and most improved farm, taking into view the entire management and cultivation, including lands, buildings, fences, orchards, crops, stock, and all other appendages, with statements in detail, relating thereto, premium, $30

IMPROVING WET MEADOW AND SWAMP LANDS.

For best conducted experiments relating to wet meadow or swamp lands, on not less than one acre, the course of management, and the produce, etc., for a period of two years at least, to be detailed, with a statement of all the incidental expenses, premiums, $15, 10

NOTE.—The Committee is instructed to ascertain how many, if any, reclaimed swamps in this County have been abandoned or have returned to natural grasses. Persons knowing of such are requested to notify the Secretary or Committee.

IMPROVING PASTURE AND WASTE LANDS.

For best conducted experiments in renovating and improving pasture land, other than by ploughing, so as to add to their value for pasturage, with a statement of the same, premiums, $15, 10

For best conducted experiments renovating and improving waste lands, so as to add to their agricultural value, with statement of the same, premiums, $15, 10

No premium to be awarded to any person for a repetition of an experiment in meadow, swamp or pasture lands, for which he has already received a premium.

UNDER-DRAINING LAND.

For best conducted experiments in under-draining land, regard being had to the variety of soil, sub-soil, and other local circumstances, premiums, $15, 10

NOTE.—The same instructions under "Improving Wet Meadow and Swamp Lands" apply to this Committee.

MANURES.

For most exact and satisfactory experiments, in the preparation and application of manures, whether animal, vegetable or mineral, premiums, $15, 10

COMPARATIVE VALUE OF CROPS AS FOOD FOR CATTLE.

For most satisfactory experiments upon a stock of cattle, not less than four in number, in ascertaining the relative value of different kinds of fodder used in feeding stock for milk and other purposes, with a statement in detail of the quantity and the value of the same, as compared with English hay, premium, $25

FATTENING CATTLE AND SWINE.

For most satisfactory experiments in Fattening Cattle or Swine, with a statement in detail of the process and result, prem., $10, 5

GRAIN AND OTHER FRUITS.

Claimants on Grain and Root Crops will be required to state the size of the piece of land, when they enter, and conform to the following rules: Entries of Grain Crops to be made on or before September 10th; Root Crops on or before October 10; giving ample time for the crops to be examined by the committee before harvesting. Statement to be made in conformity with the following form, must be forwarded to the Committee previous to November 1st.

All calculations and figures given in reports of, and statements of Crops, are to be made on the *basis of an acre*, results in all cases, to be given at the rate per acre.

In pursuance of authority delegated to the Board of Agriculture by Chap. 24, of Acts 1862, Agricultural Societies receiving the bounty of the State are required to make use of the following form, and be governed by its conditions in the mode of ascertaining the amount of crops entered for premium.

ESSEX AGRICULTURAL SOCIETY.—Statement concerning a crop of ————, raised by Mr.————, in the town of ————, ————, 1892.

What was the crop of 1890? What manure was used and how much? What was the crop of 1891? What manure was used and how much? What is the nature of the soil? When, and how many times ploughed, and how deep? What other preparation for the seed? Cost of ploughing and other preparation? Amount of manure, in loads of thirty bushels, and how applied?

Value of manure upon the ground? How used? (What amount of Commercial Fertilizer used? How used? Value of same when applied?) When and how planted? The amount and kind of seed? Cost of seed and planting? How cultivated and how many times? Cost of cultivation, including weeding and thinning? Time and manner of harvesting? Cost of harvesting, including the storing and husking or threshing? Amount of crop, etc. Signed by ————Competitor.

The committee, to whom is entrusted the award of the premiums on field crops, may award them according to their judgment, but for the purpose of furnishing accurate statistics for the benefit of agriculture, shall select certain of the crops, and require the owners thereof to measure the land and weigh the crops accurately, giving to the committee a certificate of the same, and give all pos-

sible information thereon over their own signatures, and return the same to the Secretary of the Society, to be published in the annual transactions.

In ascertaining the amount of crop, any vessel may be used and the weight of its contents once, multiplied by the number of times it is filled by the crop.

In measuring the land or weighing crops, any competent person may be employed, whether a sworn surveyor or not, and must give certificate.

The certificate shall state the weight of all crops only in a merchantable state.

In ascertaining the amount of a hay crop entered for premium, the measurement of the hay in the barn may be employed.

Rules of Measure Practiced and Adopted by the State Board of Agriculture.

Wheat, Potatoes, Sugar Beets, Ruta Bagas, Mangold Wurtzels,	60	lbs. to bush.,
White Beans and Peas,	62	" "
Corn, Rye,	56	" "
Oats,	32	" "
Barley, Buckwheat,	48	" "
Cracked Corn, Corn and Rye, and other meal, except Oat,	50	" "
Parsnips, Carrots,	55	" "
Onions,	52	" "

1. For the best conducted experiments of Rye, not less than twenty bushels to the acre, fifty-six lbs. to the bushel, on not less than one acre, premiums, $10, 5

2. For best conducted experiments of Wheat, not less than thirty bushels to the acre, sixty pounds to the bushel, on not less than one acre, premiums, $10, 5

3. For best conducted experiments of Oats, not less than fifty bushels to the acre, thirty-two pounds to the bushel, on not less than one acre, premiums, $10, 5

4. For best conducted experiments of Barley, not less than forty bushels to the acre, forty-eight pounds to the bushel, on not less than one acre, premiums, $10, 5

5. For best conducted experiments of Indian Corn, on not less than one acre, premiums, $10, 5

6. For largest quantity and best quality of English Hay, on not less than one acre, regard being had to the mode and cost of cultivation, premiums, $10, 5

7. For best yield of Field Beans, on not less than one-half acre, and not less than twenty-five bushels per acre, premiums, $10, 5

ROOT CROPS.

1. For best conducted experiments in raising Carrots, fifty-five pounds to the bushel, premiums, $10, 5

2. For best conducted experiments in raising Parsnips, fifty-five pounds to the bushel, premiums, $10, 5

3. For best conducted experiments in raising Ruta Bagas, sixty pounds to the bushel, premiums, $10, 5

4. For best conducted experiments in raising Mangold Wurtzels, sixty pounds to the bushel, premiums, $10, 5
5. For best conducted experiments in raising Sugar Beets, sixty pounds to the bushel, premiums, $10, 5
6. For best conducted experiments in raising Onions, fifty-two pounds to the bushel, premiums, $10, 5
7. For best conducted experiments in raising Potatoes, sixty pounds to the bushel, premiums, $10, 5
8. For best conducted experiments in raising Cabbages, premiums, $10, 5
9. For best conducted experiments in raising Squashes, premiums, $10, 5
10. For best conducted experiments in raising Summer English Turnips for the market, premiums, $10, 5

Raised on not less than half an acre, and the quantity of crop to be ascertained by weight; so far as practicable the crop to be free from dirt, without tops, and in a merchantable condition at the time of measurement.

Claimants for premiums on Grain and Root Crops must forward statement to chairman of committee *before Nov. 1st.*

FOREST TREES.

1. For plantation of either of the following species of forest trees, viz: White Oak, Yellow Oak, Locust, Birch, White Ash, Maple, Walnut, or White Pine, not less than three years old, and not less than 1000 trees, premium, $20
2. For plantation of not less than 600 trees, premium, $10
3. For ornamental trees, ten or more set on any street, road or farm, and cared for five years, premium, $10

CRANBERRIES.

For best conducted experiment in the cultivation of the Cranberry, at least two summers, on not less than twenty rods of land with written statement of the quantity and quality of the land, expense of planting, weeding and culture, and amount of crops produced. Premium to be paid in 1891 and 1892. $15

For best experiment do., on not less than ten rods of land, premium, $10

For best do., on not less than five rods of land, premium, $5

STRAWBERRIES AND OTHER SMALL FRUITS.

For best crop of strawberries, on not less than twenty rods of land, expense of planting, culture, crop, etc., stated in writing, premium, $10

For best crop of Currants, Raspberries and Blackberries, with statement as above, premiums, each, $10

NEW WINTER APPLES.

For a new variety of Winter Apple, originated in this County, equal or superior to the Baldwin, premium, $100

For a new variety of like character originating elsewhere, provided it has been cultivated in the County sufficiently to prove it

equal or superior to the Baldwin for general purposes, premium, $20

For a successful experiment in destroying the codling moth and other worms destructive to the apple, premium, $25

NOTE.—Persons who consider themselves competitors will send Post Office address to Secretary, and others in the County wishing to compete for above, must notify Secretary, and furnish a full statement of their apple, and also scions when called for under his directions, to be tested by the Society.

SEEDING POTATOES AND EXPERIMENTS.

For best Seeding Potato, originating in Essex County, to equal in yield, earliness, and quality, the Early Rose, and to surpass it in one or more of these particulars, premium paid after three years' trial, $25

In testing the value of a Seeding Potato, the committee are instructed to take sworn testimony of the cultivator with regard to the yield, after having inspected the crop.

For the most satisfactory experiment to extend through five consecutive years, to settle the following facts relative to raising potatoes:—premium, $50

1st. Will whole, medium sized Potatoes, yield better results than pieces cut to two eyes?

2nd. What will be the result of continuously planting small-sized potatoes of the same strain a series of years?

3rd. Difference between hilling and flat cultivation.

4th. Effect, if any, of cutting off seed ends before planting.

5th. Effects of deep and shallow planting.

6th. Raising from sprouts alone from same strain.

7th. Can potatoes having dwarf vines be planted nearer than others?

8th. Best distance apart for seed in the drill.

9th. To show the effect of covering the top with earth at several times after they had come up.

To be raised on not less than a half acre of land, uniform in character, and all to receive the same kind and quality of manure and cultivation, and to be inspected by the committee at the time of gathering the crops.

ESSAYS AND FARM ACCOUNTS.

The Essays must be transmitted to the Secretary by the 1st of November, with sealed envelopes containing the names of their authors, respectively, which shall not be opened by the committee, nor shall the names be known to the committee until they shall have decided upon the merit of the Essays.

For original Essays on any subject connected with Agriculture, in a form worthy of publication, premiums, $15, 10, 8

For best statement of Actual Farm Accounts, drawn from the experience of the claimant, in a form worthy of publication, premium, $10

For Reports of Committees upon subjects for which premiums are offered, premiums, $10, 8, 6

Committee—G. L. Streeter, Salem; N. M. Hawkes, Lynn; D. E. Safford, Hamilton; Geo. E. Blodgette, Rowley; J. M. Danforth, Lynnfield.

LIBRARY.

Committee—Andrew Nichols, Danvers; Henry Brooks, Salem; B. P. Ware, Marblehead; J. M. Danforth, Lynnfield.

ENCOURAGING AGRICULTURAL LIBRARIES.

It shall be the duty of the Committee to communicate with such persons in the several cities and towns in the County, as, in their judgment, will best encourage the establishment of, or improvement of, collections of books, pamphlets, reports, essays, newspapers, etc., relating to agriculture, and request their aid in thus advancing the cause of agriculture, and co-operate with such persons in promoting the objects herein referred to.

Committee—Francis H. Appleton, Peabody; Henry Wheatland, Salem; James J. H. Gregory, Marblehead.

NEW MEMBERS.

For the person who obtains the largest number of new members for the Society from any Town or City before the first day of November next, premium, $6

Note.—Names of new members, with name of person procuring them, can be sent as fast as obtained, to the Secretary of the Society, who will make a record of them.

Persons paying three dollars will receive a "Certificate of Membership" which is for life. No fines or assessments are ever imposed and members are entitled to vote in all its transactions, with the free use of the Library and a copy of the publication of Society's transactions each year.

Committee—Secretary, John M. Danforth, Lynnfield.

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FARMERS' INSTITUTES.

Francis H. Appleton, James P. King, C. C. Blunt, O. S. Butler, John M. Danforth, Lynnfield.

DELEGATES.

From the Essex Agricultural Society to attend Exhibitions of Societies, Farmers' Clubs and Fruit Growers' Associations in Essex County, and report any information that shall seem valuable for publication.

The Secretary to be notified of time of holding their exhibition, who will notify the chairman of Committee to assign Delegate.

COMMITTEES.

All Committees, including committees to judge of Crops, of exhibits at Fair, and of the Arrangements for the Fair, are chosen by the Trustees at their June meeting.

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TRANSACTIONS

FOR THE YEAR 1893

OF THE

ESSEX AGRICULTURAL SOCIETY

(ORGANIZED 1818.)

FOR THE

COUNTY OF ESSEX,

IN MASSACHUSETTS,

AND ITS

SEVENTIETH ANNUAL ADDRESS

BY

HON. NATHAN M. HAWKES,

OF LYNN.

With the Premium List for 1894.

PUBLISHED BY ORDER OF THE SOCIETY.

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ADDRESS.

Mr. President and Fellow Members of the Essex Agricultural Society:

Thoreau, the keen observer, the philosopher of nature, walking along the southern exposure of his neighbor's hill-top on a first day of March, noted in his journal

"It is spring there, and Minot is puttering outside in the sun. How wise in his grandfather to select such a site for his house."

The Essex Agricultural Society, the honored guild of the farmers of Essex, has had a corporate existence of seventy-five years, having been incorporated in 1818.

To-day occurs the seventieth annual address. The Psalmist says that "three score years and ten are the length of man's days." The unbounded vitality of our Society after seventy-five years of usefulness is a striking reversal of Shakespeare's aphorism "The evil that men do lives after them." We can say the good that men do lives after them.

At such a milestone perhaps we may rest for one day from learned discussions and philosophical essays and glance back over the way we have traveled and then forward to see what lies before us.

There is a fraternity of race blood in this Society which may not be apparent to outsiders. Strangers may

query why so many names appear as the authors of annual addresses who are not practical farmers. The point cannot be better illustrated than here in this ancient and historic Haverhill.

A few years since, an instructive address was delivered by your brilliant young District Attorney. Readers of the wonderful self-revealing "Diary" of Chief Justice Samuel Sewall—the brave Witchcraft Judge, who publicly acknowledged his error—himself an Essex man, will appreciate the interest which the sons take in the affairs of the old County. Sewall's "Diary" abounds in references to Brother Moody, and whoever bears in his veins the colonial blood of the Sewalls and Moodys must respond to the call for service from his kin.

Sewall's "Diary" also lovingly dwells upon many cherished visits at Brother Northend's. Hence a descendant of Brother Northend of the old stock, going out to Nature for strength for forensic toils, came to the Society with words of experience.

Another man of our own time, whose family lines run back to the planting of the colony, whose genial presence has been a benison to our annual gatherings—the beloved Sheriff—has been a welcome speaker.

Timothy Pickering, who delivered the first address and was the organizer and first President of this Society, may not be called a practical farmer, but every fibre of his being was in close touch with the men of the soil who made Essex County historic ground.

Before the tragic scenes at Lexington and Concord had startled the world, Col. Timothy Pickering and the men of Salem had made (February 28—1775) the first armed

resistance to British aggression at the old North Bridge. In February, the men of Salem and Marblehead struck the key note, which, in April, resounded from Middlesex.

Col. Pickering was Post-master General, Secretary of War, and Secretary of State in the cabinets of Washington and Adams. Later, he was Chief Justice of the Essex County Court of Common Pleas, United States Senator, and Representative in Congress from the Essex District.

He rounded out a long and useful career by promoting and organizing the society under whose auspices we are assembled to-day. Under his call the first meeting was held at Cyrus Cummings' tavern, at Topsfield, on the 16th day of February, 1818. Ichabod Tucker was chosen moderator and David Cummings, secretary; these, with John Adams, Paul Kent and Elisha Mack, were appointed a committee to report a plan of organization. Timothy Pickering was chosen president; and William Bartlett, Dr. Thomas Kittredge, John Heard and Ichabod Tucker, vice-presidents; Leverett Saltonstall, secretary; and Dr. Nehemiah Cleaveland, treasurer. Timothy Pickering was annually chosen president for ten years, to 1829, when he again delivered the annual address.

Col. Pickering was followed by Andrew Nichols, the botanist, the beloved physician of Danvers.

Then came that liberal preacher, the Rev. Abiel Abbott, of Beverly, of whom President Monroe said that he was the best talker he ever knew.

From that day on, the clergymen have done their share of the talking, as was eminently fit in a society of Puritan descent. I shall not presume to speak of the living, so I

pass by the present pastor of the First Church (the Village Church), of Danvers, and mention his predecessor, the sturdy leader of Orthodox thought, the preacher of the faith of the fathers, the Rev. Milton P. Braman. And there is also recalled, that pious scholar, wit, and humorist, the Rev. Dr. Leonard Withington, of Newbury, who described himself as "a modified Calvinist."

The Bar has been drawn upon for its leaders from "the silver tongued" James H. Duncan, and his cousin, the courtly Leveret Saltonstall, to the time of Judge Otis P. Lord and General Benjamin F. Butler. Caleb Cushing obeyed your call, he, of whom Isaac O. Barnes wittily and truthfully said: "There is a living, self-moving cyclopedia, from whom you can obtain information upon every question that has interested any people in any age of the world."

Gen. Henry K. Oliver, the versatile, the teacher, the sweet singer, the mayor of two cities, made his contribution and the fluent, ever ready Dr. George B. Loring was here, as everywhere among farmers, the popular favorite, for he delivered the annual address on three occasions.

This is not a catalogue of names of those who have addressed the Society, but I cannot refrain from naming two who were zealous in the cause of intelligent forestry. Ben: Perley Poore made Indian Hill a magnet that drew wits, savants, and practical men of affairs from the world over. Richard S. Fay made Lynnmere an earthly paradise. He created a forest which has become a profitable woodland. It is a stately memorial of the taste and genius of a man who was devoted to the development of agriculture.

The actual farmers who have followed the calling nearest to nature as a vocation to which other matters were mere avocations have been prominent.

Although honors came to such men as Hon. Daniel P. King, Gen. Josiah Newhall, and Hon. Asa Tarbell Newhall, enthusiastic devotion to and skilled direction of the farm were paramount and sufficient.

Hon. Asa T. Newhall is recorded as delivering the address in 1849, and again in 1884, but of course you know as well as I that it was not the old Squire who addressed you in the latter year, but his grandson of the same name and inherited talents, who now makes hay while the sun shines on the home farm. Verily, the sons find it pleasant to tread the paths of labor and of honor in the footsteps of respected sires.

These are but representative names in the galaxy of Essex men who have addressed this Society. Every address has been carefully prepared and a vast variety of interesting topics have been discussed.

A collection of the whole would make a valuable library for an intelligent household.

I should shrink from being added to this list, if I did not feel that the honor came to me, not as a personal one, but as a recognition of a family whose successive generations have tilled the soil on the intervales of Saugus River, from the planting of the colony to the present day. Members of this family are active in the councils of the Society, and I am grateful to be allowed to link my name with those who have gone before me, as an active member of the Essex Agricultural Society.

This Society is old enough to have made for itself an enviable history, but Essex agriculture had a world re-

nowned origin long before the days of Col. Pickering and his worthy associates. The first page of the first volume of "The Records of the Governor and Company of the Massachusetts Bay in New England" bears a memorandum supposed to be in the hand-writing of Mr. Washborne, the first secretary of the Company, which is pregnant with and significant of a great event in the world's history. Its date is March 16, (the year unknown), probably 1628. If so, Endicott had not sailed. Winthrop would not depart for two years.

Without any verbiage or sentimentality in a matter of fact paper, it reveals without the need of comment or concordance what the company thought were prime objects and necessities in the great scheme of emigration.

I quote from the memorandum:

To provide to send for Newe England:

Ministers;
Pattent vnder seale:
A seale:
Wheate, rye, barly, oates, a lhed. of ech in the eare:
beues, pease:
Stones of all sorts of fruites, as peaches, plums, filberts, cherries;
Peare, aple, quince kernells, pomegranats:
Saffron heads;
Liquorice seed, rootes sent; & Madder rootes;
Potatoes;
Hoprootes;
Hempseede;
Flaxe seede, agenst wynter;
Connys;
Currant plants;
Tame Turkeys:

In that London chamber, with all the signs ominous of the Puritan revolt, Mathew Cradock, Thomas Goffe, Isaac Johnson, Sir Richard Saltonstall, John Humfrey, John Winthrop and their associates, with amazing shrewdness, yet in Christian humility, planned one of the epochs in the world's history.

First, of course, they selected ministers—the spiritual guides and comforters of the flock.

Secondly, they agreed to send over the Charter—the patent under seal. This instrument they regarded as their "Magna Charta," something which was to give them powers of government which Charles and his advisers never dreamed of when it was granted.

Having provided for the religious and civil government, the next consideration was to stock the intending colony with choice seeds for planting in the new soil.

The list was comprehensive—it embraced everything which was thought of value. From it one fact stands out boldly, namely, that the founders contemplated an agricultural and not a commercial community. The renown and wealth which came later from the fisheries, from commerce and then from manufactures, were not foreseen.

The farmers have maintained the Canaan of the fathers, and, looking upon the exhibit of this fair, may we query if it is not about time for Essex farmers to bury the silly question, does farming pay? and to ask instead, how many things besides the glitter of gold make it profitable?

It is time to cease to bewail the hard lot of the tillers of the soil. It is in order to tell the world that

our fathers did not find here a bleak and barren land. There is not a farmer in Essex County who deserves success, who does not achieve it. Conditions change and our farmers adapt themselves to the new demands. It may be that the great West can produce our well beloved Indian corn cheaper than we can upon our smaller areas, but the compensation is sure to be found in less work and more profit in our milk, butter and cheese and nearness to markets.

The free air of farm life does not alone fill the lungs with life-giving oxygen, and harden the muscles; it makes and develops the brain that is to guide the affairs of men. Some time ago it was the fashion to apologize for Abraham Lincoln's lack of training. Short sighted mortals. All the colleges in the world could not have so equipped him for the peculiar work he was raised up to accomplish as the out-of-doors frontier life, which, under the Divine plan, was appointed him.

Rufus Choate, whom, Peleg W. Chandler in a memorial address before the Massachusetts Historical Society styled "a glorified Yankee", was born on Hog Island in our good town of Essex.

The name, Hog Island, is not particularly attractive, but the spot itself is a singularly beautiful one. The swift in-pouring tides of the ocean rush by it up the Essex River. Long reaches of gleaming sand bars lie at its feet. The blue Atlantic beats everlastingly against its rocky headlands.

A plain old homestead with its broad inherited acres on the bluff was an ideal home for a contemplative man, as the farmer, watching the procession of the seasons, is

apt to be. The sense of environment entered the brain of the possessor of that old farm as he held the plough or swung the scythe. With such surroundings, with temperate life, with the serenity that goes with the ownership of the soil, man raises better crops than grass or vegetables, better stock than Holsteins or Jerseys; he begets children of brains. Of such Rufus Choate was a type.

And the annals of the County are resplendent with like examples of boys and girls born in the low studded comfortable houses that antedated those monstrosities in a northern climate, the—so-called Queen Anne houses—who have gone forth to charm the world and tell whether or not farming pays.

The Puritan exodus from England to Massachusetts Bay was the most wisely conceived and the most grandly executed scheme of colonization that the annals of the human race relate. The van-guard of the peaceful army of occupation, which Endicott and Winthrop and Saltonstall and Dudley and Dummer led into Essex County, was carefully made up of the flower of the "country party" of England. Men did not come alone. They brought their wives and children with them. They were a select class of God-fearing, thinking men, who made the parish meetinghouse the center of temporal as well as of spiritual affairs, from which everything radiated. No drones and no paupers were allowed to come. The wise heads who directed the movement sent out the exact proportion of blacksmiths, weavers, tanners, millers and husbandmen needed to develop the country.

There was no crowding, no reckless strife to reach the goal of wealth at the expense of one's fellows. When

the coast line became dotted with parishes, a minister of the Gospel led a little flock inland and obtained a grant for a new plantation. Where else could this sturdy stock have found elements so adapted to founding a new civilization and a better home?

The people who pity us say that our soil is rocky—with swamps and forests—that our climate is bleak. They forget that Christ was born in a cave in rocky Judea—that the crags of bonny Scotland gave voice to the genius of Robert Burns and Walter Scott—that romance, chivalry and prowess in all eras have come down out of the hill countries. What would have become of the song of our Whittier if he had been shut up inside city walls or on a dull, endless flat land?

The fathers appreciated the woods, even if the age did people them with demons. With the town lot and the tillage land each householder had set apart to him a wood lot. This wood lot furnished materials to build the house that has sheltered the planter's children even to this day. And it, by the kindness of Nature, renews itself every generation, so that the same wood keeps his children's children warm and happy which sparkled and blazed in the original fire-place.

The great salt marshes were awaiting the Englishman's scythe and his cattle, as they have every fall from that day to this. Frost and snow mantled the earth in winter, but both, as we know, are agencies under a benign Providence working for the tiller of the soil. The snow has as necessary a place in the economy of Nature in the night of the year, as the sun, in the day of the year. Even the loose stones in the earth, that others would

have considered a curse, were to our foreseeing fathers a blessing in disguise. For in the very first generation the yeoman and his boys constructed many miles of the ugly, yet enduring, stone walls that still stand—monuments alike of the thrift and grit of the founders and the loyalty of the sons of the soil.

Facilities for education are important factors in deciding whether the calling that is followed is profitable. The mind must be fed as well as the body, else one is poor indeed, though with unlimited gold. The founders of Essex County brought with the pastor, his colleague, the teacher. Amidst the broadening influences of this virgin soil, the Puritan evolved the highest instrumentality in the growth of man—the common school. It was not possible under the old world forms of government and thought. The mediæval ecclesiastic fears it more than all the potentates of earth combined, and a threat against it sounds the alarm which unites all loyal Americans. The common school had its birth here, and here it has flourished and is to-day the model for all enlightened states.

In the south gallery of the Manufactures and Liberal Arts Building at the World's Columbian Exposition hangs a map, which is attracting as much if not more attention than any other exhibit in the building. It is a map of immense proportions and shows the number of schools that each city and town in Massachusetts has established and is supporting. People from all parts of the United States have seen it and pronounced it the most wonderful exhibit yet produced. No other state—in fact no other country—can produce anything equal to it.

As early as 1635, our towns established schools, supporting them in various ways, by subscriptions, by endowments, by grants of income from the common stock lands, by fishing privileges, by tuition fees, by direct taxation, and they have been steadily climbing to the top. At no time has the work been relaxed. And now, Massachusetts leads the world in educational privileges.

Of this map the director of education of the State of New York is reported to have said to E. C. Hovey, Chairman of the Massachusetts World's Fair Commission, "If New York State could show a map such as that I would be willing to throw our entire exhibit into Lake Michigan. There is nothing which equals it."

George H. Martin's descriptive account of our schools accompanying the map shows that from its beginning the State has had a complete system of public elementary schools, secondary schools, and the college. The second century of the educational history of the State is marked by an effort to adapt the school system to the needs of a widely scattered agricultural population. On this map our county stands second to none among the counties of the State.

When you think of the great farms of the northwest and are inclined to repine because you cannot make such haste to get rich, look upon the other side of the shield. Set your schools against the hordes of foreign immigrants, who, in some of the farming states are controlling legislation against teaching English and against the existence of the common school itself. Your children's priceless privileges weigh down the scale of advantages solidly upon your side.

Of the foundation of these schools, Lord Macaulay once said in parliament: "Illustrious forever in history were the founders of the Commonwealth of Massachusetts; though their love of freedom of conscience was illimitable and indestructible they could see nothing servile or degrading in the principle that the State should take upon itself the charge of the education of the people. In the year 1642, they passed their first legislative enactment on this subject, in the preamble of which they distinctly pledged themselves to this principle, that education was a matter of the deepest possible importance and the greatest possible interest to all nations and to all communities, and that as such it was, in an eminent degree, deserving of the peculiar attention of the State."

The matter of race has much to do with success in farming. Down to the Revolution, the people of New England were, almost without exception, of pure English blood. The same statement is nearly as true to-day of the farmers of Essex County. As distinctive as the worship of the crocodile by the dwellers on the Nile, or the adoration of the god of War by the Romans, has ever been the Anglo-Saxon reverence for land.

With love of the land there is also associated regard and veneration for trees. It is true that the fathers waged war upon the forests, but that was a necessity of their situation. They wanted the sunshine to warm their virgin soil. They needed the wood for fuel, for rafters, sills and boards. Besides the requirement of cleared lands for cultivation, there was ever the thought that the clearings made so many less lurking places for the skulk-

ing Red Indian who was always a peril in the shadows of the forest.

So far as we may properly go without being charged with the sin of idolatry, we Americans are tree worshippers. It is perfectly natural for us to be so. It is bred in our bone. It is an inheritance from our English ancestors. The Romans, who made a strong impression on the native tribes of England, venerated trees, erected temples in their groves and ordained sacrifices in their honor. The Druids lived in them, as it was thought more sacred to dwell under trees and about their rock altars than in the open plains.

Trees are our most striking evidence in material things of our immortal life. We plant them and they live on far beyond our lives. In planting them we think not so much of ourselves as of the future generations. The myriad voices of the trees speak to us in the same tones that they did to our fathers in the past and as they will to our children in future ages.

The magnificent Waverly oaks were mature trees when the keel of the Mayflower touched the gleaming sands of Plymouth harbor. The south wind played the same soothing melodies through their branches then as now, though the Indian, whose moccasins noiselessly trod the sward at their feet, has vanished from the face of the earth and the humble Pilgrim from Leyden has inspired and created the greatest nation of the civilized world. The old trees saw the Red man and the Englishman play their parts and are still sturdy—as well they need be—while they listen to the polyglot tongues that now babble around them.

Seasons come and go, leaves ripen and fall, buds unfold into leaf and blossom, but the tree grows on and on and recks not that the white headed old man who thoughtfully reposes in its shade is the same person who sported beneath its limbs in childhood's merry hours.

In the good work of quickening an interest in forestry, this Society has held an advanced position, and among individuals interested, its present President is easily leader.

Nathaniel Hawthorne, the greatest story teller of New England lore, tenderly related his journeyings in "Our Old Home." Do we realize that while old England is the old home to those of the stock who have remained hereabouts, there is a vastly greater company of the descendants of people of New England birth who have found new homes in the great West, even to the Golden Gate on the Pacific? To all these millions, Massachusetts and Essex County are the old home. The standard elms and the south-facing, long sloping back roofed houses with the great stack of chimneys in the centre, to all these people are home and history and the starting point of family lines.

Over in Quincy, in such houses as are identical in form and construction and surroundings with hundreds in Essex County, the two Presidents of the United States, of Massachusetts birth were born.

In Danvers, the room in which Israel Putnam was born is kept just as it was when the tough old ranger first saw the light. The whole County is dotted with these old earth-hugging houses upon which the storms of bleak winters have beaten, in vain, for centuries.

To-day at Chicago nothing wins more praise and admiration than the John Hancock house and it is said that the Colonial exhibit in the Massachusetts department exceeds in interest anything of the kind in the fair, and that the old bureaus, the old bedsteads, and the models of the old houses to be found there have a grace and beauty in point of size, and model, and execution that is not reached in the greater part of our modern furniture or our modern dwellings.

These houses are to be found along the New England coast from Portsmouth, Rhode Island, to Wells, in Maine. But there are more of them in Essex County than any where else, more even than in Plymouth or Middlesex. They are historic houses of America, and, as a well-known writer says, they express both the English freedom of the seventeenth century and the regard for comfort and security and strength which our New England fathers were obliged to consider when they built homes of their own.

They were wisely built by men who knew the climate and by men who were founding families. They overlooked the broad acres which their builders had redeemed from the wilderness. Square, prim and strong, admirably adapted to the age in which they were built, time has mellowed their surroundings and made them one and all picturesque and important adjuncts in every hamlet in the County. Every one is full of the traditions and history of its long departed occupants and of the people.

From the windows of that house a child saw the gray stockinged young farmers from Danvers tarry for a drink

from the bucket in the well on the fateful morning of the 19th of April, 1775. The child looking from the windows saw upon the return from Lexington a sad sight for youthful eyes and for the mourners, though liberty on that day was born. The child saw the gray-stockinged forms cold in death as the rumbling wagons bore their sacred burdens back to wailing families. That child never forgot the scene, and in old age used to tell the story to younger people, and he who heard it from her lips was himself an old man when he related it to me.

Scenes an hundred years prior to Lexington have these old houses seen. Upon the bank of the North River, in the midst of the sloping fields, where to-day the September sun is ripening farmer Jacobs' crops, stands the substantial house with the surroundings practically as they were when its master, George Jacobs—Saint George of old Northfields as we call him now—was led away for shameful death in the dark days of the witchcraft troubles in 1692.

Here in Haverhill your late public spirited fellow citizen, James H. Carleton, did a characteristic and noble deed when, in his life time—not making it an after death benefaction—he secured the preservation of the birthplace of the sweet poet whose rhymed lines are in closest touch with the finest expression of New England life. Whittier is the immortal flower of rural New England. Mr. Carleton has made this plain farm house the Mecca towards which throngs of lovers of the poet will be drawn and say with him

"Nor farm house with its maple shade,
Or rigid poplar colonnade,
But lies distinct and full in sight,
Beneath this gush of sunset light."

The builders of these houses were brothers to the regicides across the sea. They were Commonwealth men. They were the advanced liberals of the age. They at home had dreamed of establishing beyond the ocean a greater England, freed from feudalism, prelacy and kingcraft. While they were setting up their Puritan theocracy, growing attached to the new homes, the experiment of the Commonwealth was tried in England and was lost when the great Cromwell died.

The profligate reign of Charles the 2nd and the bigoted reign of James the 2nd were followed by the great Revolution of 1689, which brought in the Dutch William. And then came the day of the intriguing and venal place hunters of the reign of Anne.

The Protestant Revolution of 1689 did well enough for conservative England, but the more radical Bay Colony had learned to walk alone. It wanted no Queen Anne houses with chimneys on the outside. These were adapted to negro quarters in the sunny South, but not for our north country. An American architecture had been evolved. American thought had been created, and from then on, our fathers planned for emancipation from the political yoke.

Let us not learn from strangers to appreciate the historic value nor the substantial use of the stout houses that are gems set in the grassy lanes of old Essex, but let us so care for them as to make them still more attractive to the wanderer who returns to the home of his people.

It is almost striking to observe the traits and features of one generation repeated in its successors in a locality where the people have become fixed in their habits and are acclimated to their surroundings. Such resemblances are striking in English counties, in France, and in other localities where man and the climate and the soil harmonize. These conditions seem to be fast attached to our county. If the art of photography had existed in the 17th century, the portrait of the first settler of what is now Middleton would have been a good likeness of the thrifty farmer of Middleton who took prizes for his stock at recent cattle shows. The same rule holds throughout the county. The same names prosper upon the same acres. They are still the deacons and selectmen and possessors of fat pocket-books, filled by working brains into the ancestral—rough it may be—but loved acres.

The charter granted the land to the Colony of the Massachusetts Bay in New England in fee. The Colony gave the same kind of title to towns, commoners and individuals, free from Old World services and limitations.

Out of this absolute holding of land grew an independent yeomanry, which in the fullness of time stormed Louisburg, the Gibraltar of France in America, and a generation later defied England's power on Bunker Hill.

Such men—the men of the town meeting—the men who made America the shining example of human development, came from the stock of owners and tillers of the soil.

A peasantry never accomplished such results. A peasantry may tear down, but never build up. Wherever man owns his farm, his garden, or his house, it is safe to

say that modern Nationalism—the scheme of having a paternal government own everything and regulate every man's labor, will not be popular. Such doctrines will scarcely take root in Essex County.

The general holding of farms in this county for two hundred and fifty years in family line, in fee simple, without any laws against alienation, is something without parallel in human history. Six cities have grown up (with a seventh about to assume the civic gown) without materially taking from our arable territory. No land titles in the world stand upon so just a base. We care nothing for the original grant from the King of England. The settlement was made at just that period, when under the plan of the Creator, this portion of the earth was appointed for the occupation of a new race. Pestilence and war had swept away the once numerous tribes of Red Men, so that only a scattered remnant remained. Whatever rights they had in the earth, sky and water, in the prolix phraseology of the period, they willingly conveyed to our shrewd ancestors. Thus all the lands are held by a triple title—first, the royal grant, second, the town grant, and third, the Indian release.

Since that time neither pestilence, earthquake, cyclone, famine, nor war, has devastated our domain. To-day the only danger that threatens the stone fenced ancient farms is found in the incursion of cultured, but jaded city men, who have discovered the charms of rural life and seek to dispossess after the manner of Alexander of Macedon, who said, "I despair of taking no city into which I can introduce a mule laden with gold." Such taking may not

be unwelcome to some, but it will be in the far future when the Yankee farmer yields up his supremacy amidst the hills, dales and intervales of old Essex.

Washington Irving has painted with loving minuteness the master of Bracebridge Hall.

> His certain life, that never can deceive him,
> Is full of thousand sweets, and rich content;
> The smooth-leaved beeches in the field receive him
> With coolest shade, till noontide's heat be spent.
> His life is neither tost in boisterous seas
> Or the vexatious world; or lost in slothful ease.
> Pleased and full blessed he lives, when he his God can please.

The genial squire lives in real life in every hamlet in this picturesque region of ours, from the serpentine Saugus to the majestic Merrimac.

The farmers of Essex are not forced to lead isolated lives, as is the case in most rural districts. The steam railroad penetrates every town in the county, save Nahant, and the people there much prefer to be without the luxury.

In the near future the electric car, both for freight and passengers, will stop at every farm house. This is not a Utopian dream, but a practical scheme, which the Engineering Magazine is strongly urging and which is already, so far as passengers are concerned, in actual operation in many towns; and on one line at least, freight cars run.

The constant passing of cars over city pavements between brick walls is not an unmixed blessing, but stated trips of such cars will be a great benefit to the farmer and his family, especially in those seasons of the

year when country roads—even the best—are liable to be muddy and not comfortable for ordinary locomotion.

Besides the economical uses of these cars, they will facilitate the enjoyment of another institution in which Massachusetts stands in the van—the public library system.

"Of making many books there is no end," but the Public Library is one of the marvels of the nineteenth century. Public schools and newspapers have made readers of all, but no individual can expect to own, or if he did own, could furnish shelf-room for, all the books he may desire to read. The Public Library selects, houses, cares for, and distributes the printed treasures of the thought of the world in every town to every family.

As many books are accessible to the village maiden to-day, as the scholars of the universities had at their command a few years ago.

Yes! Thoreau was right. It was fortunate for us that our fathers made their landfall upon this coast of sand-bars and rocky headlands—upon this land of marsh and wooded hillside—this region with frost enough in the atmosphere to make man work for his bread with muscle and brain—this land now teeming with folk-lore of a plain God-fearing yeomanry — this favored home of the free common school and the free public library.

They found here a soil that with industry would reward labor,—they found a land full of noble trees and charming wild flowers—they built homely houses, which they have bequeathed to us with their records of well spent and often heroic lives.

While there is a part that dwells too much upon the past, yet there is much that has come down with the heirlooms that is worthy of our emulation. While we employ all new inventions that lessen labor in our chosen callings we may ponder with profit upon the lives of our ancestors, who, with lesser means and with ruder implements made their lives successful and their influence salutary upon those who followed them.

These thoughts are trite, but when we observe the mad rush of life in cities, hearts broken and lives wrecked in the constant reverses of business, it is meet for the farmer to reflect upon his life so near to nature, so near to the things which were dear to his kin, so free from the corrosion of all other pursuits.

SEVENTY-THIRD

Annual Cattle Show and Fair.

The Cattle Show and Fair of this Society opened Tuesday, Sept. 19, 1893, at Haverhill, the weather being dull and threatening undoubtedly kept many people and some of the stock at home. The Mayor and City Government did everything in their power to help along and make the Fair a success, but owing to the depressed state of business, it was not so successful financially, as it probably would have been under other circumstances, although it was estimated there were 20,000 people on the grounds, Wednesday, the second day.

The entries of live stock were below that of last year, but the quality was up to the standard of former years and they were all on the grounds in good season.

In the ploughing match there were thirteen entries and an active competition took place with most excellent results, the grounds adjoining being covered with spectators, who appeared to be as much interested as the Ploughmen themselves.

In the Exhibition Hall the entries as elsewhere were below that of the last few years but that can be accounted for somewhat by it not being a good fruit year, and only one Grange exhibited as compared with five last year.

This was the first time the Society has held the fair three days and it seemed to be very satisfactory, as members had an opportunity to attend the annual meeting Wednesday and had plenty of time to visit all departments.

On Thursday, the last day, the annual address was delivered by Hon. N. M. Hawkes of Lynn, before a good audience in the Center Church, and was highly commended by all who heard it.

The scripture reading and prayer by Rev. T. E. St. John were appropriate for the occasion as was also the excellent singing by the "Philharmonic" Quartette.

After the conclusion of the services at the church, the annual dinner was served in Tanner's Hall, after which Vice-President Butler, in the absence of the President, called the assemblage to order, and after introductory remarks, introduced Mayor Taylor of Haverhill, who welcomed the Society to Haverhill, followed by Hon. W. R. Sessions, Secretary of the State boardof Agriculture, Hon. F. T. Greenhalge, Hon. N. M. Hawkes, Hon. Wm. H. Knox and others, all of whom made interesting and spicy remarks, which added to the occasion.

The entries in the several departments of the Fair for 1893 and 1892, are tabulated for comparison as follows:

STOCK, IMPLEMENTS, ETC. ON FREE SHOW GROUNDS.

Class.	Entries in 1893.	From Different Places in 1893.	Entries in 1892.	From Different Places. in 1892.
Fat Cattle,	2	1	8	4
Bulls,	13	5	15	7
Milch Cows,	3	1	14	3
Herds of Milch Cows,	1	1	3	3
Heifers, Pure Bred,	9	4	28	7
Heifers, Native or Grade,	13	5	32	8
Working Oxen and Steers,	4	3	7	4
Steers,	8	3	3	3
Stallions, Farm and Draft,	3	3	1	1
Stallions for Driving Purposes,	7	4	7	5
Brood Mares, Farm and Draft,	0	0	4	3

Class.	Entries in 1893.	From Different Places in 1893.	Entries in 1892.	From Different Places in 1892.
Brood Mares, Driving Purposes,	18	6	7	5
Family Horses,	6	5	9	7
Gent's Driving Horses,	8	4	7	5
Farm Horses,	8	6	9	6
Pairs of Farm Horses, over 2500 lbs.,	2	2	11	7
Pairs of Farm Horses, less then 2500 lbs.,	2	2	7	7
Colts, Farm and Draft,	6	6	12	8
Colts, Driving Purposes,	14	8	16	9
Town Teams,	0	0	1	1
Team, used on Farm,	3	3	0	0
Swine, Large Breeds,	15	4	28	8
Swine, Small Breeds,	8	3	2	1
Sheep,	4	2	6	2
Poultry,	95	15	131	13
Harrows for Trial,	4	2	1	1
Agricultural Implements,	24	9	21	7
Carriages,	4	1	15	5
Ploughing,	13	7	19	10
Total on Free Show Grounds,	297	25	428	23

EXHIBITS IN HALL.

Class.	Entries in 1893.	From Different Places in 1893.	Entries in 1892.	From Different Places in 1892.
Dairy,	5	3	10	5
Bread and Canned Fruits,	32	11	46	14
Honey,	2	2	0	0
Pears,	99	15	144	17
Apples,	86	15	197	17
Peaches, Grapes, and Assorted Fruit,	62	11	91	12
Plants,	4	2	4	1

Class.	Entries in 1893.	From Different Places in 1893.	Entries in 1892.	From Different Places in 1892.
Flowers,	120	9	92	14
Vegetables,	240	14	308	17
Grain and Seed,	19	7	25	10
Counterpanes and Afghans,	42	7	59	7
Carpetings and Rugs,	19	6	30	7
Articles Manufactured from Leather,	18	3	9	4
Manufactures and General Mdse.,	12	8	36	7
Fancy Work,	140	11	156	11
Works of Art,	109	6	94	6
Work of Children under 12 years of age,	12	6	24	6
Grange Exhibit,	1	1	4	4
Total in Hall,	1022	26	1350	27

Grand total, 1319 entries from 30 out of 35 cities and towns in Essex County, against 1778 entries from 27 cities and towns last year. Essex, Gloucester, Hamilton, Manchester and Nahant did not have exhibits this year. The entries were Amesbury, 51; Andover, 9; Beverly, 7; Boxford 70; Bradford, 57; Danvers, 21; Georgetown, 19; Groveland, 46; Haverhill, 463; Ipswich, 1 Lawrence, 57; Lynn, 61; Lynnfield, 4; Marblehead, 6; Methuen, 55; Merrimac, 17; Middleton, 4; Newburyport, 52; Newbury, 72; No. Andover, 67; Peabody, 23; Rockport, 1; Rowley, 20; Salem, 10; Salisbury, 3; Saugus, 12; Swampscott, 1; Topsfield, 6; Wenham, 2; West Newbury, 100.

REPORT OF THE ANNUAL MEETING.

The annual meeting of the Society was held in Grand Army Hall, Wednesday, Sept. 20, at 10 A. M., Pres. F. H. Appleton, presiding. On motion of Rev. O. S. Butler,

of Georgetown, it was voted—that the Secretary cast one vote for Francis H. Appleton of Peabody, for President, and he was elected. On motion of the same gentleman it was voted that the President be instructed to cast one vote for John M. Danforth of Lynnfield, for Secretary.

The meeting then proceeded to ballot for four Vice-Presidents, and James J. H. Gregory of Marblehead; James P. King, of Peabody; O. S. Butler, of Georgetown and H. G. Herrick, of Lawrence, were unanimously elected.

Voted to give the Janitor of Grand Army Hall $5.00 for the care and cleaning of the Hall for this meeting.

Voted that the Society tender a vote of thanks to the G. A. R. Post for the use of their Hall. Also to the Society for the use of their Church for the annual address, and all others who have so kindly lent their assistance to make the Fair a success.

Report of Committees.

1893.

FAT CATTLE.

The Committee on Fat Cattle have attended to their duties and respectfully report to the Secretary that they have made the following awards:

$7. First premium, to J. P. Little, Amesbury, for pair fat oxen.

$5. Second premium, to J. P. Little, Amesbury, for best fat ox.

Charles H. Leach, William Thornton, Romulus Jaques —*Committee.*

BULLS.

The Committee on Bulls have attended to their duties and respectfully report to the Secretary that they have made the following awards:

$7. First premium, to Charles Perley, Boxford, for Ayrshire bull.

$7. First premium, to Francis H. Foster, Andover, for Guernsey bull, "Theseus."

$7. First premium, to E. C. Little, Haverhill, for Holstein bull.

$7. First premium, to Thomas Sanders, Haverhill, for short horn bull, "White Cloud."

$5. First premium, to M. H. Connor, West Newbury, for Holstein bull.

$5. First premium, to Horace Moody, West Newbury, for Jersey bull.

$5. First premium, to E. C. Little, Haverhill, for Ayshire bull.

$5. Second premium, to A. E. Towne, Georgetown, for Guernsey bull.

$5. Second premium, to Thomas Sanders, Haverhill, for short horned bull.

$3. Second premium, to E. C. Little, Haverhill, for Holstein bull.

$3. Second premium, to E. C. Little, Haverhill, for Jersey bull.

$3. Second premium, to Richard Newell, West Newbury, for Ayshire bull.

Edward Kent, L. P. Harriman, B. F. Barnes—*Committee.*

MILCH COWS.

The Committee on Milch Cows have attended to their duties, and respectfully report to the Secretary that they have made the following awards:

$8. First premium, to E. C. Little, Haverhill, for Holstein cow.

$8. First premium, to E. C. Little, Haverhill, for Ayshire cow.

$8. First premium, to A. H. Adams, Haverhill, for Grade cow.

H. F. Longfellow, John S. Crosby, Charles Haseltine—*Committee.*

STATEMENT.

To the Committee on Milch Cows:

The black cow with the calf is Holstein, four years old. This is her second calf. After her first she gave twelve quarts of milk a day for three months.

The full blood Ayshire, 8 years old, due to calve, November 1st. Dropped her last calf November 5th, and

averaged sixteen quarts of milk a day, Dec., Jan., Feb., and March.

Yours respectfully,

E. C. Little,

Supt. of Crystal Lake Farm.

STATEMENT.

I enter for premium the Black and White Grade cow, Holstein and Jersey. She gave, after dropping her last calf, 2 cans of milk a day for 3 or 4 months, and the milk is of the best quality.

A. H. Adams.

HERDS OF MILCH COWS.

The Committee on Herds of Milch cows have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$15. First premium to Thomas Sanders, Haverhill, for a herd of five grade Jerseys.

Frank E. Todd, Charles Perley, H. K. Swasey, Alfred L. Moore—*Committee.*

HEIFERS—PURE BREED.

The Committee on Heifers, Pure Bred, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$5. First premium, to Francis H. Foster, Andover, for Guernsey, 6 months old.

$5. First premium, to E. C. Little, Haverhill, for Holstein, 2 years old.

$5. First premium, to E. C. Little, Haverhill, for Holstein, 1 year old.

$5. First premium, to John C. Day, Bradford, for Ayshire, 1 year old.

$7. First premium, to M. H. Connor, West Newbury, for Ayshire in milk, 3 years old.

$5. Second premium, to M. H. Connor, West Newbury, for Ayshire in milk, 3 years old.

E. G. Nason, S. F. Newman, Isaac C. Day, John A. Ellis—*Committee.*

HEIFERS—NATIVE OR GRADE.

The Committee on Heifers, native or grade, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$7. First premium, to A. H. Adams, Haverhill, for two year old heifer.

$5. Second premium, to Charles P. Balch, Groveland, for yearling heifer.

$5. First premium, to A. E. Towne, Georgetown, for one year old heifer.

$3. Second premium, to Richard Newell, West Newbury, for one year old heifer.

J. R. Gordon, Henry A. Haywood, A. A. Rutherford, N. W. Moody—*Committee.*

WORKING OXEN AND STEERS.

The Committee on Working Oxen and Steers have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$10. First premium, to Charles M. Witham, Georgetown, for working oxen.

$8. Second premium, to C. K. Ordway & Son, West Newbury, for working oxen.

$8. First premium, to C. K. Ordway & Son, West Newbury, for working steers.

J. E. Bradstreet, Martin L. Hoyt, Nathan Longfellow, Nathaniel P. Perkins—*Committee.*

STEERS.

The Committee on Steers have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$7. First premium, to J. P. Little, Amesbury, for 3 year old steers.

$5. Second premium, to Horace Moody, West Newbury, for 3 year old steers.

$6. First premium, to Wm. H. Poor, West Newbury, for 2 year old steers.

$4. Second premium, to J. P. Little, Amesbury, for 2 year old steers.

$5. First premium, to Horace Moody, West Newbury, for 1 year old steers.

$3. Second premium, to J. P. Little, Amesbury, for steer calves.

J. Otis Winkley, M. H. Connor, Nathan F. Abbott—*Committee.*

TEAMS USED ON A FARM.

The Committee on Teams used on Farms, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$5. First premium, to C. K. Ordway & Son, West Newbury, for two pair oxen.

$3. Second premium, to J. P. Little, Amesbury, for two pair oxen.

$5. First premium, to E. C. Little, Haverhill, for three pair of horses.

Thomas Sanders, A. P. Russell, W. E. Merrill, J. H. Nason—*Committee.*

STALLIONS FOR FARM AND DRAFT PURPOSES.

The Committee on Stallions for Farm and Draft Purposes have attended to their duty, and respectfully

report to the Secretary that they have made the following awards:

$10. First premium, to William Oswald, Lawrence, for bay Clysdale stallion, 5 years old.

$7. First premium, to J. W. Carlyle, Ipswich, for gray Clysdale stallion, 3 years old.

$6. Second premium, to Henry Garso, Lynn, for bay Clysdale stallion, 5 years old.

W. F. Kinsman, John H. Perkins, S. D. Hood—*Committee.*

STALLIONS FOR DRIVING PURPOSES.

The Committee on Stallions for Driving Purposes have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$10. First premium to Arthur J. Connor, Lawrence, for Fearnaught stallion, "Ned C.," 14 years old.

$6. Second premium, to Leslie K. Morse, Haverhill, for stallion, "Pentucket," 5 years old.

$7. First premium, to H. H. Demsey, Wenham, for Wilkes stallion, 3 years old.

$5. Second premium, to J. W. Murphy, Lawrence, for stallion, three years old.

O. S. Butler, Thomas Sanders, J. H. Drew, B. A. Follansbee—*Committee.*

BROOD MARES—DRIVING PURPOSES.

The Committee on Brood Mares for Driving Purposes have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$10 First premium, to H. H. Demsey, Wenham, for bay mare, 8 years old.

$6. Second premium, to Leslie K. Morse, Haverhill, for brood mare.

$4. Third premium, to J. H. Tower, Haverhill, for black mare, 11 years old.

O. L. Carlton, Alonzo B. Fellows, Moses H. Poor, John Flye—*Committee.*

FAMILY HORSES.

The Committee on Family Horses have attended to their duty, and respectfully report to the Secretary, that they have made the following awards:

$8. First premium, to John L. Hobson, Haverhill, for brown gelding.

$6. Second premium to Edwin Bates, Lynn, for bay mare, "Nellie Eaton."

$4. Third premium, to Byron G. Kimball, Haverhill, for brown mare.

M. M. Plummer, James O. Parker, Richard Newell, Joseph H. Blunt—*Committee.*

GENTS' DRIVING HORSES.

The Committee on Gentlemen's Driving Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$8. First premium, to Byron G. Kimball, Haverhill, for gray mare.

$6. Second premium, to Wm. Merriman, Haverhill, for bay mare.

Benj. F. Brickett, W. H. Hayes, George L. Averill—*Committee.*

SINGLE FARM HORSES.

The Committee on Single Farm Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$8. First premium, to John H. Perkins, Lynnfield, for bay mare, weighing 1250 lbs.

$6. Second premium, to W. L. Hill, Peabody, for black horse, weighing 1400 lbs.

$8. First premium, to J. D. W. French, No. Andover, for brown mare weighing 1188 lbs.

$6. Second premium, to E. C. Little, Haverhill, for bay gelding, weighing 1040 lbs.

E. A. Emerson, Edwin Bates, H. M. Goodrich—*Committee.*

PAIRS OF FARM HORSES WEIGHING OVER 2500 LBS.

The Committee on Pairs of Farm Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$8. First premium, to Wm. C. Coffin, Newburyport, for pair of horses weighing 2800 lbs.

$6. Second premium, to A. E. Towne, Georgetown, for pair of horses weighing 2600 lbs.

W. P. Bailey, E. C. Little, C. N. Maguire—*Committee.*

PAIRS OF FARM HORSES WEIGHING LESS THAN 2500 LBS.

The Committee on Pairs of Farm Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$8. First premium, to W. E. Merrill, West Newbury, for pair black horses weighing 2220 lbs.

$6. Second premium, to E. C. Little, Haverhill, for pair of bay horses weighing 2300 lbs.

L. W. Hawkes, M. H. Connor—*for the Committee.*

COLTS FOR FARM PURPOSES—THREE AND FOUR YEARS OLD.

The Committee on Colts for Farm Purposes three and four years old have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$7. First premium, to John H. Perkins, Lynnfield, for chestnut colt, 4 years old.

$5. Second premium, to Woodbury Smith, Rowley, for roan mare colt, 3 years old.

$3. Third premium, to Richard Jaques, Newbury, for roan mare colt, 3 years old.

Sherman Nelson, Edward H. Potter, John Parkhurst, D. D. Adams, C. K. Ordway—*Committee.*

COLTS FOR FARM PURPOSES, ONE AND TWO YEARS OLD.

The Committee on Colts for Farm Purposes, one and two years old have attended to their duty, and respectfully report to the Secretary that they have made the following award:

$7. First premium, to E. C. Little, Haverhill, for 2 year old chestnut colt.

John H. George, Thomas E. Snell, John S. Crosby—*Committee.*

COLTS FOR DRIVING PURPOSES, THREE AND FOUR YEARS OLD.

The Committee on Colts for Driving Purposes, three and four years old, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$7. First premium, to H. H. Hoyt, Haverhill, for brown colt, 4 years old.

$5. Second premium, to John C. Day, Bradford, for 4 years old colt.

$5. First premium, to E. H. George, Groveland, for chestnut gelding, 3 years old.

$3. Second premium, to A. H. Adams, Haverhill, for bay mare colt, 3 years old.

S. D. Hood, C. D. Ordway, R. T. Jaques Jr.—*Committee.*

COLTS FOR DRIVING PURPOSES, ONE AND TWO YEARS OLD.

The Committee on Colts for Driving Purposes, one and two years old, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$7. First premium to Byron G. Kimball, Haverhill, for bay colt, 2 years old.

$5. First premium, to John H. Perkins, Lynnfield, for brown colt, 15 months old.

$3. Second premium, to Arthur H. Meserve, No. Andover, for black Morgan colt, 14 months old.

F. A. Russell, S. H. Bailey, B. F. Barnes—*Committee.*

SWINE—LARGE BREEDS.

The Committee on Swine, large breeds, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$6. First premium, to W. L. Hill, Peabody, for Chester White boar.

$6. First premium, to W. L. Hill, Peabody, for Yorkshire sow and pigs.

$6. First premium, to W. L. Hill, Peabody, for Berkshire breeding sow.

$6. First premium, to W. L. Hill, Peabody, for four weaned pigs.

$4. Second premium, to W. L. Hill, Peabody, for seven weaned pigs.

$6. First premium, to Nathan Longfellow, Groveland, for Chester White sow and pigs.

$6. First premium, to E. G. Nason, West Newbury, for seven weaned pigs.

$6. First premium, to A. W. Butrick, Haverhill, for Berkshire boar.

$4. Second premium, to Richard Newell, West Newbury, for Chester White boar.

$4. Second premium, to E. C. Little, Haverhill, for Chester sow and pigs.

John Barker, George A. Dow, Leverett Swan—*Committee.*

SWINE—SMALL BREEDS.

The Committee on Swine, small breeds, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$6. First premium, to W. L. Hill, Peabody, for Yorkshire sow and six pigs.

$6. First premium to J. F. Calhoun, Lawrence, for Yorkshire boar.

$4. Second premium, to W. L. Hill, Peabody, for Duroc Jersey weaned pigs.

$4. Second premium to W. L. Hill, Peabody, for Poland China pigs.

$4. Second premium, to J. D. W. French, No. Andover, for Yorkshire sow and pigs.

T. H. O'Neil, Amos Haseltine, C. M. Lunt, Nath'l Marble, Henry F. Nason—*Committee.*

SHEEP.

The Committee on Sheep have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$8. First premium, to J. D. W. French, No. Andover, for Oxforddown buck.

$5. First premium, to J. D. W. French, No. Andover, for grade Oxforddown lambs.

$8. First premium, to Richard Newell, West Newbury, for Southdown buck.

$6. Second premium, to Richard Newell, West Newbury, for grade Southdown sheep.

C. C. Blunt, C. N. Maguire, Homer Dow—*Committee.*

POULTRY.

The Committee on Poultry have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$8. First premium, to Mrs. J. H. Perkins, Lynnfield, for flock of ten, with statement of a year's product from 50 hens.

$2. First premium, to Lewis W. Hawkes, Saugus, for Toulouse geese.

$2. First premium, to Lewis W. Hawkes, Saugus, for Embden geese.

$2. First premium, to Lewis W. Hawkes, Saugus, for Toulouse goslings.

$2. First premium, to Lewis W. Hawkes, Saugus, for Rouen ducks.

$2. First premium, to Lewis W. Hawkes, Saugus, for Rouen ducklings.

$2. First premium, to Lewis W. Hawkes, Saugus, for Pekin ducks.

$2. First premium, to Lewis W. Hawkes, Saugus, for Pekin ducklings.

$2. First premium, to Lewis W. Hawkes, Saugus, for Pekin bantams.

$2. First premium, to Lewis W. Hawkes, Saugus, for pair of turkeys.

$2. First premium, to George T. Bates, Lynn, for Minorca fowls.

$1. Second premium, to John F. Jackson, Georgetown, for Langshan fowls.

$2. and diploma. First premium, to L. K. Pemberton, Groveland, for Plymouth Rock fowls.

$1. Second premium, to C. H. Hardy, Groveland, for White Wyandotte chicks.

$1. Gratuity, to Charles E. Symonds, Salem, for English Golden Pheasants.

$2. and diploma. First premium, to Addison Noyes, Newburyport, for B. P. Black Minorcas.

$2. First premium, to Addison Noyes, Newburyport, for Cornish Indian Game.

$1. and diploma to W. Willis, West Newbury, for pen White Wyandottes.

$1. Second premium, to Mrs. Homer Dow, Methuen, for Plymouth Rock chicks.

$2. First premium, to E. R. Perkins, Salem, for Plymouth Rock chicks.

$2. First premium, to E. R. Perkins, Salem, for Golden Wyandotte fowls.

$2. First premium, to E. R. Perkins, Salem, for Golden Wyandotte chicks.

$2. First premium, to E. R. Perkins, Salem, for Crevecour chicks.

$2. First premium, to Wm. W. Osgood, Haverhill, for coop Light Brahmas.

$2. First premium, to Wm. W. Osgood, Haverhill, for trio Dark Brahmas.

$2. First premium, to Wm. W. Osgood, Haverhill, for S. C. Brown Leghorns.

$1. Second premium, to Wm. W. Osgood, Haverhill, for Brown Leghorn chicks.

$1. Second premium, to Wm. W. Osgood, Haverhill, for Barred Plymouth Rocks.

$2. First premium, to Wm. W. Osgood, Haverhill, for Indian Game fowls.

$1. Second premium, to Wm. W. Osgood, Haverhill, for Buff Cochin chicks.

$2. First premium, to Wm. W. Osgood, Haverhill, for Partridge Cochin chicks.

$1. Second premium, to Wm. W. Osgood, Haverhill, for Golden Wyandotte and Partridge Cochin hens.

$1. Second premium, to R. B. Smith, No. Andover, for S. C. White Leghorns.

$2. First premium, to R. B. Smith, No. Andover, for Dark Brahma Fowls.

$2 First premium, to Martha A. Dummer, Newbury, for White Wyandottes.

$2. First premium, to Peter Hoogerziel, Beverly, for Pekin bantams.

Diploma to M. H. Sands, Lawrence, for Brown Leghorn chicks.

$1. Second premium, to M. H. Sands, Lawrence, for trio Brown Leghorn chicks.

$2. First premium to E. N. Little, Haverhill, for Buff Wyandottes.

$1. Second premium, to Homer Dow, Methuen, for Brown Leghorns.

$2. First premium, to Joseph Pearson, Newbury, for White Cochins.

$2. First premium, to J. S. Haddock, Haverhill, for White Plymouth Rock chicks.

$2. First premium, to Edmund Torduff, Methuen, for Black Langshan chicks.

$2. First premium, to Anson L. Griffin, Lawrence, for Black Langshan fowls.

$2. First premium, to Anson L. Griffin, Lawrence, for Barred Plymouth Rocks.

$2. First premium, to Anson L. Griffin, Lawrence, for Houdans.

$1. Second premium, to Anson L. Griffin, Lawrence, for Black Minorcas.

$2. First premium, to Anson L. Griffin, Lawrence, for Mottled Anconas.

$2. First premium, to Thomas Sanders, Haverhill, for Buff Cochins.

$1. Second premium, to Thomas Sanders, Haverhill, for Bronze turkeys.

$1. Second premium, to Thomas Sanders, Haverhill, for wild turkey gobblers.

$2. First premium, to Willard W. Chace, Groveland, for White Plymouth Rock fowls.

$1. Second premium, to Willard W. Chace, Groveland, for White Plymouth Rock chicks.

$2. First premium, to Willard W. Chace, for S. L. Wyandotte fowls.

$2. First premium to John J. Collins, Haverhill, for Pitt Game fowls.

$2. First premium, to S. P. Smith, Haverhill, for trio Andalusians.

$2. First premium, to George C. Perkins, Haverhill, for Black Java chicks.

$2. First premium, to G. H. Grenman, Haverhill, for Black Cochins.

$2. First premium, to J. J. Connor, West Newbury, for trio Game fowls.

$1. Second premium, to J. J. Connor, West Newbury, for R. C. Leghorn fowls.

$2. First premium, to J. J. Connor, West Newbury, for R. C. Leghorn chicks.

$2. First premium, to J. J. Connor, West Newbury, for R. C. Game chicks.

$5. Gratuity, to A. L. Griffin, Lawrence, for best poultry appliances.

J. H. Tenney, Virgil Dow, James O. Parker—*Committee.*

Your committee on poultry, entered upon their duties at the Fair recently held at Haverhill with a great deal of distrust as to their qualifications to satisfactorily discharge the trust reposed in them. They were plain, practical farmers, and not poultry experts or fanciers; and from a plain, practical farmer's standpoint they only could judge of the poultry exhibit. To them the fowl that would lay the largest number of eggs, or the chicks that would make the finest market poultry and bring the highest price, would be the ones to be commended, rather than those whose combs, or wattles, or hackle feathers, or particular markings were exactly up to the standard of those who pose as infallible authority on poultry matters. While by no means ignoring the "points" which are regarded as necessary to make a fowl worthy to receive a first premium, still they considered that size, shape, fineness of bone and flesh, and a general appearance of healthiness, were of more than equal value. "With malice toward none and charity toward all" breeds of fowl, they endeavored to fulfil their duties honestly and impartially. The exhibit was very large and of unusual merit, and the committee soon perceived that it would be less difficult to decide what ought to be awarded premiums than what must be passed by. The exhibits of E. R. Perkins of Salem, L. W. Hawkes of Saugus, and A. L. Griffin of Lawrence, were large and of great excellence, and they are to be commended for the perfection to which they have bred their fowls. The noble geese and beautiful ducks exhibited by Mr. Hawkes, attracted much notice from the visitors and deservedly so. Of several varieties he exhibited two coops each of equal merit, so far as the

committee could judge, and evidently Mr. Hawkes felt that he ought to receive both 1st and 2d premium on them. There being no competitors, and there being no question in the committee's mind as to their merit, they felt that if any premium was to be awarded it should be a 1st premium, and as *two* 1st premiums to the same exhibitor are not according to the rules of the society, as the committee understood them, they could not award them to him. Moreover they had already awarded him nine 1st premiums, and these fowls being regarded by them as specimens of his flock, they could not conscientiously award him a 2d premium.

The committee desire to ask, for the benefit of other committees that may come after them, that hereafter the poultry exhibit shall be arranged in groups according to *breeds*, instead of grouping each exhibitor's *coops*, together, maybe of many different breeds. In this way the committee can much more easily compare the exhibits and decide as to their merits.

The committee were much hindered and troubled at the recent fair by the crowd of visitors that were constantly in the tent while they were making the examinations and were making up their decisions; and they would respectfully ask the feasibility of a rail excluding all visitors from the tent for a reasonable time—one hour, or perhaps a little longer time. They feel certain that if the breeds had been arranged in groups together, and the crowd of visitors excluded from the tent, they could have accomplished more and have done the work more satisfactorily in one hour than they did in two. The committee regret that they feel the necessity of calling your attention to one phase of their experience which was unpleasant and somewhat embarrassing, viz:—the disposition on the part of a few of the exhibitors to closely follow them and to hear whatever might be said about their exhibits or the exhibits of others, and in some

instances to interfere with them while in the discharge of their duties, and in one case it became so persistent that the committee informed him that according to the rules of the Society he had forfeited his claim to receive premiums. To the honor of most of the exhibitors be it said that there was no interference from them, but for the sake of the few who try to influence the judges in favor of their own exhibits they should be reminded of the rule forbidding all interference.

Respectfully submitted,

J. H. TENNEY,

Chairman of Committee.

ROWLEY, Sept. 28, 1893.

STATEMENT OF MRS. J. H. PERKINS, LYNNFIELD CENTRE, MASS.

The fowls entered for premium are a cross between Red Leghorn and Light Bramah, hatched by Prairie State Incubator, in May, 1892, and began laying in September.

When hatched they were transferred to brooders, heated with kerosene lamp. At the seventh day all infertile eggs were tested from the incubator. These I boiled hard and fed to the chicks, with fine cracked corn sifted from the coarse. The second week I added baked potatoes and whole wheat thoroughly scalded. When three weeks old a small quantity of animal meal and scraps were added to their fare, feeding five times a day, also leaves from white clover and fine oyster shell. When six weeks old I gave a soft feed, consisting of cracked corn, oats, wheat one fourth each, with a liberal quantity of animal meal and scraps, feeding morning and noon, at night I gave them cracked corn, wheat and barley, one third each. This course of feed was continued through the winter with the addition of clover hay cut fine and two qts. of cooked potatoes scalded with their morning feed, and sufficient salt to season the whole feed.

During the winter I gave them chopped cabbage, finding they ate it with greater relish than when served whole, also with less waste of the cabbage.

I had cabbage furnished for them on exchange for the dressing made by the hens.

Clean water was kept constantly by them.

Egg production, eight thousand, seven hundred and twenty eggs, or seven hundred and twenty-six and two-thirds dozens.

Average per hen one hundred and seventy-four and two-fifths.

Cost of feed per hen for the year, one dollar and eight cents.

Average per doz. eggs, twenty-eight cents.

Profit per hen, two dollars and ninety-eight cents.

PLOUGHING WITH DOUBLE TEAMS.

The Committee on Ploughing with Double Teams have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$10. First premium, to J. P. Little, Amesbury. plough used "Varning" No. 2.

$8. Second premium, to C. K. Ordway, West Newbury, plough "Doe" C.

$10. First premium. to E. C. Little, Haverhill, 4 horses, plough "Hussey" 104.

George L. Hawkes, Allen Smith, E. G. Nason—*Committee.*

PLOUGHING WITH HORSES, ANY PLOUGH EXCEPT SWIVEL.

The Committee on Ploughing with Horses, any plough except Swivel, have attended to their duty and respectfully report to the Secretary that they have made the following awards:

$8. First premium, Fred H. Poor, West Newbury, two horses, 106 Hussey plough.

$6. Second premium, W. E. Merrill, West Newbury, two horses, 106 Hussey plough.

$4. Third premium, A. E. Towne, Georgetown, two horses, 104 Hussey plough.

Alonzo B. Fellows, Chas. N. Maguire, L. H. Bailey, Abel Stickney—*Committee.*

PLOUGHING WITH TWO HORSES, SWIVEL PLOUGH.

The Committee on Ploughing with Swivel Plough have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$8. First premium, to A. M. Robinson, Andover, plough 76.

$6. Second premium, to J. D. W. French, No. Andover, plough, Yankee.

B. F. Barnes, Geo. B. Austin, Daniel D. Adams, Peter Holt Jr.—*Committee.*

PLOUGHING WITH THREE HORSES.

The Committee on Ploughing with Three Horses have attended to their duty, and respectfully report to the Secretary that they have made the following award:

$8. First premium, to M. H. Connor, West Newbury, plough Doe No. 4.

S. S. Lewis, Alvin Smith, Joshua H. Chandler—*Committee.*

PLOUGHING WITH SULKY PLOUGH.

The Committee on Ploughing with Sulky Plough have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$8. First premium, to E. C. Little, Haverhill, National Reversible plough.

$6. Second premium, to C. A. Bixby, Danvers, National Reversible plough.

Asa T. Newhall, D. M. Cole, Isaac F. Knowlton—*Committee.*

HARROWS.

The Committee on Harrows have attended to their duty and respectfully report to the Secretary that they have made the following awards:

$8. First premium, to J. D. W. French, No. Andover, for Acme Harrow.

$6. Second premium, to Henry Newhall & Co., Danvers, for Yankee Pulverizer.

E. A. Emerson, Charles F. Austin, Daniel A. Carlton—*Committee.*

AGRICULTURAL IMPLEMENTS.

The Committee on Agricultural Implements have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$10 and diploma, to Henry Newhall & Co., Danvers, for Collection of Implements.

$5. First premium to Geo. E. Daniels, Rowley, for 2 horse cart.

$3. First premium, to Peter Hoogerziel, Beverly, for patent wheelbarrow.

$1.50. First premium, to J. P. Little, Amesbury, for ox yoke.

$6. Gratuity, to Hanscom Bros., Haverhill, for two Yankee ploughs.

$5. Gratuity, to Inter National Scraper Co. for two wheel road scraper.

$2. Gratuity, to Byron F. R. Perkins, Georgetown, for fruit basket.

$2. Gratuity, to George E. Daniels, Rowley, for one horse cart.

$2. Gratuity, to George E. Daniels, Rowley, for light tip cart.

$5. Gratuity, to J. L. Colcord, Peabody, for champion mower.

$1. Gratuity, to Joseph E. Dodge, Rowley, for set of marsh shoes.

W. J. Munroe, Charles A. Ladd, H. F. Longfellow—*Committee.*

CARRIAGES.

The Committee on Carriages have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$5. Gratuity, to Means & Hopkins, Merrimac, for Victoria beach wagon.

$4. Gratuity, to Means & Hopkins, Merrimac, for sleighs.

George E. Daniels, Edward Harrington, Richard Newell—*Committee.*

Of the foregoing premiums five hundred and eight dollars and fifty cents are offered as State Premiums.

IN EXHIBITION HALL.

DAIRY.

The Committee on Dairy have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$7. First premium, to Mrs. C. W. Gowen, West Newbury, for 5 lbs. butter.

$1. First premium, to Edwin Bates, Lynn, for dozen hens eggs.

$1. First premium, to N. K. Fowler, Boxford, for dozen Plymouth Rock eggs.

John L. Shorey—*for the Committee.*

STATEMENT OF MRS. C. W. GOWEN.

These five pounds of butter were made from the milk of Jersey cows. My milk was set in pans about one-half full and skimmed in 36 hours. After enough cream was collected, it was churned, washed and salted at the rate of one ounce to one pound of butter. After standing several hours it was worked over and stamped.

BREAD AND CANNED FRUIT.

The Committee on Bread and Canned Fruit have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$3.00. First premium, to Mrs. Chas. C. Anderson, Bradford, for white bread.

$2.00. Second premium, to Mrs. Annie A. Foote, Danvers, for white bread.

$2.00. First premium, to Mrs. Lizzie J. Wilson, Danvers, for graham bread.

$1.00. Second premium, to Mrs. Betsey Lyons, Groveland, for graham bread.

$1.50. First premium, to Mrs. Lizzie J. Wilson, Danvers, for brown bread.

$1.50. First premium, to Mrs. Lizzie J. Wilson, Danvers, for rye bread.

$1.00. Third premium, to Mrs. Frank W. Poore, Haverhill, for white bread.

.50 Gratuity, to Edna E. Moore, Groveland, for white bread.

.50 Gratuity, to Mrs. Carrie Wales, Groveland, for white bread.

.50 Gratuity, to Mrs. Moses Smith, West Newbury, for white bread.

$3.00. First premium, to Mrs. Warren M. Cole, Boxford, for 30 jars canned fruit.

$3.00. First premium, to L. H. Bassett, No. Andover, for a collection of canned fruit.

$2.00. Second premium, to Mrs. J. Henry Hill, Amesbury, for 27 jars canned fruit.

$2.00. Second premium, to Mrs. Thaddeus Hale, Rowley, for 12 tumblers jelly.

$1.00. Gratuity, to Mrs. C. W. Gowen, West Newbury, for 5 lbs dried apples.

Mrs. E. P. Nichols, Mrs. Isaac C. Day, Mrs. J. H. Perkins, Mrs. J. H. Chandler, Mrs. J. Henry Hill—*Committee.*

STATEMENT OF MRS. M. J. ANDERSON, BRADFORD, FIRST PREMIUM, WHITE BREAD.

This bread was made of Bridal Veil flour, Fleischman yeast cake, milk, three quarters of an hour baked, twenty-four hours old.

STATEMENT OF MRS. LIZZIE J. WILSON DANVERS, FIRST, PREMIUM, GRAHAM BREAD.

One pint graham flour, one-half pint wheat flour, one-half pint warm water, one-half pint compressed yeast cake, one tablespoon molasses, one teaspoon salt. Mix as stiff as can be stirred with a spoon. Let it rise over night and bake about an hour in a moderate oven. This quantity makes one loaf.

STATEMENT OF MRS. BETSEY LYONS, GROVELAND, SECOND PREMIUM, GRAHAM BREAD.

Flour, Glen Mills "Graham Meal" and St. Louis fl Time raised, eighteen hours; time kneaded, twenty minutes; time baked, one hour, fifteen minutes; warm water, one quart; yeast cake, one half "Fleischman's; "molasses, one scant teacupful; lard, the size of a hen's egg; salt, two teaspoonfuls; soda, one third teaspoonful; Graham meal, four coffeecupfuls; St. Louis flour, five coffeecupfuls. Mix at noon, bake next morning. Dissolve one-half yeast cake in one cup of water taken from the quart of warm water. Put molasses, lard, salt and soda into the pan with the remainder of the quart of water and mix thoroughly, add the yeast, then the meal and flour. Stir briskly into a stiff dough but not stiff enough to knead. Set in a warm place three hours, then in a cool place until bedtime. At bedtime take on to the moulding-board and add flour enough to knead and knead fifteen minutes, return to the pan, set in a cool place until morning. Early in the morning, knead five minutes, make into loaves, raise until light enough to bake, bake one hour fifteen minutes.

STATEMENT OF MRS. LIZZIE J. WILSON, DANVERS, MASS. BROWN BREAD.

Two cups Indian meal, two cups rye, one cup flour, two-thirds cup molasses, one pint milk—either sweet or sour, one and one-half teaspoonfuls soda, one teaspoonful salt, steam three hours.

RYE BREAD.

One pint rye meal, one-half pint corn meal, one-half pint wheat flour, one tablespoonful salt, one compressed yeast cake, one pint warm water, sift the rye, corn meal and flour together, add the water and salt and yeast cake; let rise until light and bake in a moderate oven 45 minutes.

STATEMENT OF MRS. F. W. POOR.

Two and one-half quarts flour, a pinch of salt, half cup of sugar, tablespoonful of lard, quarter of yeast cake, pint lukewarm milk, rise three times. "Urban Flour."

STATEMENT OF ANNA L. COLE, WEST BOXFORD.

This may certify that the preserves entered by me for premium are made one pound of sugar to one pound of fruit and cooked in the jars one-half hour.

STATEMENT OF MRS. J. HENRY HILL, AMESBURY.

In canning fruit, I use a syrup made by putting one quart of boiling water into 2 quarts of sugar and boiling a few minutes then I throw in one-half pint of cold water to clear it.—For pears and peaches I cook in clear water until a straw will pierce them easily then put them into the syrup and simmer a few moments.

For sweet pickles I use 4 pounds of sugar to 1 quart of vinegar, cooking the fruit in the syrup, and spice to taste.

STATEMENT OF MRS. THADDEUS HALE.

JELLIES.

Boil fruit in porcelain kettle twenty minutes. Strain through fine cheese cloth. Boil five minutes. Allow one pound of sugar to pint of juice. Heat sugar. Boil one minute after adding sugar.

SPICED CURRANTS.

Three pounds of sugar, one pint of vinegar, tablespoonful cloves, cinnamon and allspice. Make into a syrup add six pounds of currants; boil twenty minutes.

HONEY.

The Committee on Honey have attended to their duty and respectfully report to the Secretary that they have made the following awards:

$3. First premium, to John Barker, No. Andover, for honey.

$2. Second premium, to Edwin Hazeltine, Haverhill, for honey.

$1. Gratuity, to Charles Knight, Haverhill, for bees.

Your Committee found two entries of honey in comb, and the same of extract or liquid honey.

Mr. Charles Knight, of Haverhill, exhibited a few pounds of honey, and a hive of bees, but as no statement, as required by the rules of the Society, accompanied the exhibit, no premiums were awarded, but the Committee thought it best to award Mr. Knight a gratuity of one dollar.

Henry Alley, John J. Gould, Warren M. Cole, John H. George—*Committee.*

PEARS.

The Committee on Pears have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$3.00 First premium, to Edwin Bates, Lynn, for Anjou pears.

$3.00. First premium, to Edwin Bates, Lynn, for Bosc pears.

$3.00. First premium, to Edwin Bates, Lynn, for Bartlett pears.

$3.00. First premium, to Edwin Bates, Lynn, for Louise Bonne pears.

$3.00. First premium, to Edwin Bates, Lynn, for Howell pears.

$1.00. Gratuity, to Edwin Bates, Lynn, for Sheldon pears.

$1.00. Gratuity, to Edwin Bates, Lynn, for Duchess pears.

$1.00. Gratuity, to Edwin Bates, Lynn, for Lawrence pears.

$1.00. Gratuity, to J. D. Foote, Haverhill, for Haverhill pears.

$1.00. Gratuity, to B. Beckett, Haverhill, for Louise Bonne pears.

$3.00. First premium, to S. J. Richards, Lawrence, for Vicar pears.

$3.00. First premium, to Allen Barr, Lawrence, for Seckel pears.

$3.00. First premium, to S. J. Barr, Lawrence, for Dana's Hovey pears.

$1.00. Gratuity, to Maggie Shay, Lawrence, for Lawrence pears.

$1.50. Gratuity to W. Burke Little, Newbury, for Clairgeau pears.

$3.00. First premium, to J. W. Marsden, Lawrence, for Clairgeau pears.

$3.00. First premium, to Mrs. Robert Lindsay, Lawrence, for Sheldon pears.

$3.00. First premium, to James Wilson Topsfield, for Onondago.

$1.00. Gratuity, to J. Henry Hill, Amesbury, for Bosc pears.

$1.00. Gratuity, to J. Henry Hill, Amesbury, for Anjou pears.

$3.00. First premium, to J. J. H. Gregory, Marblehead, for Paradise d'Automne pears.

$1.00. Gratuity, to J. J. H. Gregory, Marblehead, for Belle Lucrative pears.

$1.00. Gratuity, to George Walton, Peabody, for Clapp's Favorite pears.

$1.50. Gratuity, to George Walton, Peabody, for de Congrus pears.

$1.00. Gratuity, to E. F. Webster, Haverhill, for Merriam pears.

$1.00 Gratuity, to E. F. Webster, Haverhill, for Vicar pears.

$3.00. First premium, to Roland Pray, Haverhill, for Duchess pears.

$3.00. First premium, to Walter B. Allen, Lynn, for Lawrence pears.

$3.00. First premium, to Walter B. Allen, Lynn, for Belle Lucrative pears.

$3.00. First premium, to Walter B. Allen, Lynn, for Urbaniste pears.

$6.00. First premium, to Edwin Bates, Lynn, for collection of pears.

$3.00. Second premium, to J. Henry Hill, Amesbury, for collection of pears.

Peter M. Neal, A. C. Osborne, B. F. Huntington, William Willcomb—*Committee.*

APPLES.

The Committee on Apples have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$3.00. First premium, to Mrs. John M. Haseltine, Haverhill, for Gravenstein.

$3.00. First premium, to S. F. Newman, Newbury, for Tolmans Sweet.

$3.00. First premium, to W. Burke Little, Newbury, for Roxbury Russett.

$1.50. Second premium, to C. M. Lunt, Newbury, for Gloria Mundee.

$1.50. Second premium, to C. M. Lunt, Newbury, for Red McIntosh.

$1.50. Second premium, to Michael Shea, Lawrence, for Maiden Blush.

$1.50. Second premium, to Thomas P. Hale, Rowley, for Transcendent Crab.

$3.00. First premium, to Charles F. Knight, Newbury, for Hubbardston.

$3.00. Charles F. Knight, Newbury, for Farneuse.

$3.00. First premium, to George F. Sanger, Peabody, for Drap D'Or.

$2.00. First premium, to Mrs. David Warren, Swampscott, for Pickman Pippin.

$1.00. Gratuity to Benj. Griffin, Lawrence, for Gille Flower.

$3.00. First premium, to Walter F. Hutchinson, Danvers, for Hunts Russett.

$1.50. Second premium, to Henry M. Killam, Boxford, for Golden Russett.

$3.00. First premium, J. Henry Hill, Amesbury, for Smiths Cider.

$3.00. First premium, to J. Henry Hill, Amesbury, for Granite Beauty.

$3.00. First premium, to J. Henry Hill, Amesbury, for Red Russett.

$1.50. Gratuity, to J. Henry Hill, Amesbury, for Collection.

$3.00. First premium, to George D. Walton, Peabody, for Tompkins King.

$1.50. Second premium, to George D. Walton, Peabody, for Haas.

$1.50. Second premium, to George D. Walton, Peabody, for Hawley's Seedling.

$3.00. First premium, to Thaddeus Hale, Rowley, for Baldwin.

$3.00. First premium, to C. W. Gowen, West Newbury, for R. I. Greening.

$3.00. First premium, to E. F. Childs, Lawrence, for Porter.

$1.00. Gratuity, to O. L. Sargent, Haverhill, for R. I. Greening.

$1.50. Second premium, to O. L. Sargent, Haverhill, for Northern Spy.

$2.00. Gratuity, to D. B. Hill, Peabody, for Gravenstein.

$1.50. Second premium, to George D. Walton, Peabody, for Essex County Baldwin.

W. H. B. Currier, Andrew Nichols, E. F. Webster, J. W. Goodell, S. G. Sargent—*Committee.*

PEACHES, GRAPES AND ASSORTED FRUITS.

The Committee on Peaches, Grapes and Assorted Fruit have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$2.00. First premium, Charles Knight, Haverhill, for Late Crawford.

50c. Gratuity, to Charles Knight, Haverhill, for Old Mixon.

1.00. Gratuity, to Edwin Bates, Lynn, for Yellow flesh.

1.00. Gratuity, to P. M. Neal, Lynn, for Foster Peach.

1.00. Gratuity, to Charles F. Knight, Newbury, for Mammoth.

50c. Gratuity, to Henry Merrill, Haverhill, for Victoria.

50c. Gratuity, to John Barker, No. Andover, for Mixon.

2.00. First premium, to John Barker, No. Andover, for Foster.

1.50. Gratuity, to Mary E. Lindsay, Lawrence, for Foster.

50c. Gratuity, to J. Henry Hill, Amesbury, for Seedling.

2.00. First premium, to Geo. W. Sargent, Merrimac, for Seedling.

2.00. First premium, to E. H. Foster, Haverhill, for Yellow flesh.

50c. Gratuity, to E. F. Webster, Haverhill, for Seedling.

GRAPES.

3.00. First premium, to S. M. Titcomb, West Newbury, for Worden.

3.00. First premium, to Annie Griers, Lawrence, for Concord.

3.00. First premium, to W. P. Hutchinson, Danvers, for Niagara.

50c. Gratuity, to Charles Knight, Haverhill, for Derreula.

50c. Gratuity, to Charles Knight, Haverhill, for Pocklington.

50c. Gratuity, to Charles Knight, Haverhill, for Dracut Amber.

1.00. Gratuity, to Edwin Bates, Lynn, for Champion.

50c. Gratuity, to S. J. Barr, Lawrence, for Martha.

1.00. Gratuity, to S. J. Barr, Lawrence, for Worden's Seedling.

1.00. Gratuity to Virgil Dow, Methuen, no name.

50c. Gratuity, to W. P. Hutchinson, Danvers, for Moore's Early.

50c. Gratuity, to W. P. Hutchinson, Danvers, for Diamond.

QUINCES.

3.00. First premium, to L. K. Pemberton, Groveland, for Orange Quince.

1.00. Gratuity, to James A. Day, Haverhill, for Orange.

1.00. Gratuity, to George A. Rogers, No. Andover, for Champion.

1.00. Gratuity, to Edwin Bates, Lynn, for Orange.

PLUMS AND ASSORTED FRUIT.

1.00. Gratuity, to J. W. Goodell, Lynn, for Washington Plum.

50c. Gratuity, to J. W. Goodell, Lynn, for Gini Plum.

2.00. First premium, to J. W. Goodell, Lynn, for Downing's Early Plum.

1.00. Gratuity, to Charles F. Knight, Newbury, for Purple Egg Plum.
2.00. First premium, to Charles F. Knight, Newbury, Seedling Plum.
50c. Gratuity, to Charles F. Knight, Newbury, for Yellow Gage.
50c. Gratuity, to J. H. Tenney, Rowley, for Quackenbos Plum.
2.00. First premium, to J. H. Tenney, Rowley, for Reine Claud Plum.
50c. Gratuity, to C. H. Foster, Lawrence, for Weaver Plum.
50c. Gratuity, to J. Henry Hill, Amesbury, for Moore's Arctic.
2.00. First premium, to W. K. Cole, Boxford, for Lombard Plum.
50c. Gratuity, to J. Henry Hill, Amesbury, for Native Plum.
4.00. First premium, to Edwin Bates, Lynn, for Basket of Assorted Fruit.

Walter B. Allen, George B. Bradley, John F. Jackson —*Committee.*

PLANTS.

The Committee on Plants have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

1.00. First premium, to Frank W. Poor, Haverhill, for 2 Dracenas.
1.00. First premium, to Mrs. V. A. Gardner, Haverhill, for English Ivy.
1.00. First premium, to Mrs. Charles Perley, Boxford, for English Ivy.
50c. Gratuity, to A. R. Dodge, Haverhill, for Amaryllis Lily.

T. C. Thurlow, Mrs. N. C. Ladd, Miss Clara A. Hale, Mrs. J. W. Chadwick—*Committee.*

FLOWERS.

The Committee on Plants and Flowers have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

1.00. First premium, to Emma H. Gage, Methuen, for Calendulas.

1.00. First premium, to Emma H. Gage, Methuen, for Salpiglosis.

50c. Gratuity, to Emma H. Gage, Methuen, for Basket Garden Flowers.

1.00. Gratuity, to Daniel Mighill, Boxford, for 32 Varieties Wild Flowers.

2.00. First premium, to B. F. Bickam, Haverhill, for 2 Bouquets Wild Flowers.

50c. Gratuity, to Sarah B. Barnes, Haverhill, for Bouquet of Poppies.

3.00. Second premium, to George H. Hill, Haverhill, for Floral Design.

1.00. First premium, to Andrew Lackey, Haverhill, for Assorted Dahlias.

7.00. First premium, to Mrs. Geo. L. Averill, No. Andover, for Floral Design.

1.00. Gratuity, to Mrs. Geo. L. Averill, No. Andover, for Bouquets for Vases.

2.00. First premium, to M. N. Brancold, Haverhill, for Collection Pansies.

1.00. Gratuity, to Mrs. Jennie G. Kimball, Methuen, for Star design in Pansies.

2.00. First premium, to Mrs. Edwin Haseltine, Haverhill, for Garden Bouquet.

1.00. Gratuity, to Mrs. Edwin Hazeltine, Haverhill, for Native Bouquet.

75c. Gratuity, to Mrs. Edna Hazeltine, Haverhill, for Sweet Peas.

1.00 First premium, to Mrs. M. E. Burleigh, Haverhill, for 24 Zinnias.

1.00. First premium, to Mrs. M. E. Burleigh, Haverhill, for Drum Phlox.

1.00 First premium, to Mrs. M. E. Burleigh, Haverhill, for 12 Dianthus.

1.00. First premium, to Mrs. M. E. Burleigh, Haverhill, for Scabioscas.

50c. Gratuity, to Mrs. Henry Merrill, Haverhill, for Pompon Astors.

2.00. First Premium, to Stanley O. Ladd, Groveland, Basket Native Flowers.

50c. Gratuity, to Mrs. N. E. Ladd, Groveland, for Garden Flowers.

1.00. Gratuity, to Mrs. Charles Perley, Boxford, for Sweet Peas.

1.00. First premium, to City Farm, Haverhill, for Sweet Peas.

1.00. First premium, to City Farm, Haverhill, for two Bouquets.

1.00. First premium, to City Farm, Haverhill, for Bouquet of Dahlias.

1.00. First premium, to City Farm, Haverhill, for Nasturtiums.

50c. Gratuity, to Frank W. Poor, Haverhill, for Carnations.

1.00. First premium, to Dr. Sawyer, Haverhill, for 12 Double Petunias.

1.00. First premium, to Blanch Emerson, Haverhill, for 24 Single Petunias.

1.00. Gratuity, to William Ferguson, Groveland, for Collection Gladiolas.

2.00. First premium, to Mrs. J. H. Hill, Amesbury, for Basket Garden Flowers.

1.00. Second premium, to Mrs. J. H. Hill, Amesbury, for Perennials.
1.00. First premium, to Mrs. J. H. Hill, Amesbury, for Single Dahlias.
1.00. First premium, to Mrs. A. L. Cain, Lynn, for Pompon Dahlias.
1.00. First premium, to Mrs. A. L. Cain, Lynn, for 24 Annuals.
1.00. First premium, to Mrs. J. A. Cain, Lynn, Single Geraniums.
1.00. First premium, to Mrs. J. A. Cain, Lynn, for Double Geraniums.
1.00. Second premium, to Mrs. J. A. Cain, Lynn, for 2 Garden Bouquets.
5.00. First premium, to Mrs. J. A. Cain, Lynn, for 100 Specimens Flowers.
2.00. First premium, to T. C. Thurlow, West Newbury, for Hardy Phlox.
1.00. Gratuity, to T. C. Thurlow, West Newbury, for 25 Cannas.
1.00. Gratuity, to Mrs. E. A. Perley, Boxford, for Collection of Flowers.
5.00. Gratuity, to Charles Tassanario, Danvers, for Floral Design.

E. E. Woodman, Mrs. William Horner, Mrs. E. V. Gage, Mrs. C. W. Gowen, Mrs. Paul Perkins—*Committee.*

VEGETABLES.

The Committee on Vegetables have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$3.00. First premium, to Edwin Bates, Lynn, for sweet corn.
3.00. First premium, to Edwin Bates, Lynn, for Mangel Wurtzels.

.50. Gratuity, to Edwin Bates, Lynn, for Edmands beets.

3.00. First premium, to W. Burke Little, Newbury, for Short Horn carrot.

3.00. First premium, to W. Burke Little, Newbury, for Long Orange carrot.

3.00. First premium, to W. Burke Little, Newbury, for Edmands beets.

.50. Gratuity, to E. C. Little, Haverhill, for Mangel Wurtzels.

1.00. Gratuity, to George B. Austin, Boxford, for Purple Top turnip.

5.00. First premium, to Cochickewick Farm, No. Andover, for collection of vegetables.

.50. Gratuity, to Cochickewick Farm, No. Andover, for Edmands beets.

.50. Gratuity, to W. Jaques, Newbury, for Danvers Intermediate carrot.

3.00. First premium, to L. H. Bassett, No. Andover, for Short Top carrot.

3.00. First premium, to Andrew Lane, Rockport, for Cranberries.

1.00. Gratuity, to H. A. Stiles, Middleton, for Cranberries.

3.00. First premium, to H. A. Stiles, Middleton, for Strap Leaf turnip.

.50. Gratuity, to G. S. Phippen, Methuen, for sweet corn.

3.00. First premium, to Virgil Dow, Methuen, for Intermediate carrot.

.50. Gratuity, to George L. Averill, No. Andover, for sweet corn.

1.00. Third premium, to Henry M. Killam, Boxford, for Cranberries.

.50. Gratuity, to D. M. Cole, Boxford, for Danvers Carrot.

.50. Gratuity, to Virgil Dow, Methuen, for Dewings Blood beet.

3.00. First premium, to Virgil Dow, Methuen, for parsnips.

1.00. Gratuity, to Virgil Dow, Methuen, for sweet corn.

.50. Gratuity, to T. G. Phillips, Bradford, for early sweet corn.

.50. Gratuity, to R. Jaques, Newbury, for Danvers carrot.

3.00. First premium, to R. Jaques, Newbury, for Eclipse beet.

.50. Gratuity, to R. Jaques, Newbury, for Mangel Wurtzels.

1.00. Gratuity, to A. N. Currier, Haverhill, for sweet corn.

3.00. First premium, to W. K. Cole, Boxford, for sweet corn.

2.00. Second premium, to W. K. Cole, Boxford, for cranberries.

3.00. First premium, to J. O. Connor, West Newbury, for Ruta bagas.

.50. Gratuity, to W. K. Cole, Boxford, for Corey sweet corn.

1.00. Gratuity, to G. M. Sargent, Groveland, for carrots.

.50. Gratuity, to E. Webster, Haverhill, for sweet corn.

2.00. Second premium, to A. P. Russell, Methuen, for Stone Mason cabbage.

3.00. First premium, to A. P. Russell, Methuen, for red cabbage.

3.00. First premium, to A. P. Russell, Methuen, for Beauty of Hebron potatoes.

3.00. First premium, to E. Webster, Haverhill, for Early Rose potatoes.

3.00. First premium, to E. Webster, Haverhill, for Early Maine potatoes.

3.00. First premium, to Fred A. Russell, Methuen, for Hubbard squash.
2.00. Second premium, to Fred A. Russell, Methuen, for Savoy cabbage.
2.00. First premium, to E. Webster, Haverhill, for Christian melons.
5.00. First premium, to Cochickewick Farm, No. Andover, for collection of vegetables No. 2.
3.00. First premium, to Cochickewick Farm, No. Andover, for Turban squash.
3.00. First premium, to Cochickewick Farm, No. Andover, for Essex Hybrid squash.
3.00. First premium, to George B. Austin, Boxford, for Sibley squash.
3.00. First premium, to George B. Austin, Boxford, for Bay State squash.
1.00. Gratuity, to Walter I. Chadwick, Boxford, for Danvers Yellow onions.
3.00. First premium, to W. Burke Little, Newbury, for Red Globe onion.
1.00. Gratuity, to W. Burke Little, Newbury, for Cumberland Red tomatoes.
3.00. First premium, to Charles W. Webster, Haverhill, for Brunswick cabbage.
3.00. First premium, to Charles W. Webster, Haverhill, for Essex Hybrid tomatoes.
3.00. First premium, to Richard Newell, West Newbury, for Savoy cabbage.
.50. Gratuity, to George W. Gallison, Haverhill, for Hubbard squash.
2.00. Second premium, to L. H. Bassett, No. Andover, for Red cabbage.
3.00. First premium, to L. H. Bassett, No. Andover, for Stone Mason cabbage.
3.00. First premium, to L. H. Bassett, No. Andover, for Acme tomato.

3.00. First premium, to L. H. Bassett, No. Andover, for Red Cross tomato.

2.00. Second premium, to W. H. Greenleaf, Salisbury, for Cauliflower.

3.00. First premium, to J. J. H. Gregory, Marblehead, for Yellow flat onions.

1.00. Gratuity, to J. J. H. Gregory, Marblehead, for Red onions.

2.00. First premium, to Homer Dow, Methuen, for water melons.

2.00. First premium, to Edwin Bates, Lynn, for Salmon fleshed melon.

1.00. Gratuity, to Edwin Bates, Lynn, for Acme tomatoes.

3.00. First premium, to D. M. Cole, Boxford, for Livingston's Beauty tomato.

1.00. Gratuity, to J. Warren Chadwick, Boxford, for Marrow squash.

.50. Gratuity, to T. G. Phillips, Bradford, for Freeman potatoes.

.50. Gratuity, to T. G. Phillips, Bradford, for Marrow squash.

1.00. Gratuity, to R. Jaques, Newbury, for Boston Marrow squash.

1.00. Gratuity, to W. K. Cole, Boxford, for Hebron potatoes.

3.00. First premium, to W. K. Cole, Boxford, for Clarke's No. 1 potato.

3.00. First premium, to W. K. Cole, Boxford, for Cauliflower.

3.00. First premium, to W. K. Cole, Boxford, for All Seasons cabbage.

1.00. Gratuity, to M. J. Connor, West Newbury, for Rural New York potatoes.

1.00. Gratuity, to John Litch, Newbury, for Danvers Globe onions.

3.00. First premium, to M. K. Noyes, Newbury, for Danvers onions.

3.00. First premium, to A. G. Whitten, Bradford, for Marrow squash.

2.00. First premium, to A. G. Whitten, Bradford, for Musk melon.

Asa T. Newhall, W. K. Cole, L. H. Bassett, Eben True, E. P. Barrett—*Committee.*

GRAIN AND SEED.

The Committee on Grain and Seed have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$3.00. First premium, to Edwin Bates, Lynn, for 25 ears Pop corn.

2.00. Third premium, to C. K. Ordway & Son, West Newbury, for 25 ears Field corn.

1.00. First premium, to C. K. Ordway & Son, West Newbury, for White Dutch oats.

3.00. Second premium, to Henry M. Killam, Boxford, for Trace of field corn.

1.00. First premium, to Henry M. Killam, Boxford, for shelled corn.

5.00. First premium, to A. S. Longfellow, Groveland, for 25 ears Field corn.

1.00. First premium, to J. O. Connor, West Newbury, for winter rye.

1.00. First premium, to J. O. Connor, West Newbury, for yellow eye beans.

2.00. Second premium, to Virgil Dow, Methuen, for Trace pop corn.

L. H. Bailey, E. A. Emerson, R. L. Smith—*Committee.*

COUNTERPANES AND AFGHANS.

The Committee on Counterpanes and Afghans have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$4.00. First premium, to M. Blanch Whitman, Haverhill, for Crochet quilt.

2.00. Second premium, to Mrs. Lewis Killam, Haverhill, for Cotton quilt.

1.00. Gratuity, to Mrs. J. L. Ricard, Haverhill, for Silk quilt.

1.00. Gratuity, to Mrs. Rufus Williams, Haverhill, for Silk quilt.

.50. Gratuity, to Mrs. O. Warren, West Newbury, for Silk quilt.

1.50. Gratuity, to Mrs. Bernard Copping, Groveland, for Knitted afghan.

1.00. Gratuity, to Mrs. W. S. Whittier, Haverhill, for Crochet afghan.

1.00. Gratuity, to Mrs. S. A. Brookings, Newburyport, for Cotton quilt.

1.00. Gratuity, to Mrs. E. W. Killam, Boxford, for Knitted quilt.

.75. Gratuity, to Mrs. A. M. Tilton, Haverhill, for Crochet afghan.

.50. Gratuity, to Mrs. G. W. Walton, Haverhill, for Silk quilt.

.50. Gratuity, to Lucy E. Millet, Georgetown, for Silk quilt.

.50. Gratuity, to Dillie Mellen, Haverhill, for Crochet afghan.

.75. Gratuity to Dillie Mellen, Haverhill, for Crochet afghan.

.50. Gratuity, to Mrs. Eliza Fuller, Newburyport, for Crochet quilt.

1.00. Gratuity to Mrs. A. Copp, Haverhill, for Silk quilt.

.50. Gratuity, to Bessie Knapp, Newburyport, for Sofa throw.

.50. Gratuity, to Mrs. L. C. Hanscom, Haverhill, for Cotton quilt.

1.00. Gratuity, to Mrs. S. J. Morey, Haverhill, for Silk quilt.

1.00. Gratuity, to Mrs. B. F. Kelley, Haverhill, for Knit quilt.

.50. Gratuity, to Mrs. H. M. Richardson, Newburyport, for Silk quilt.

.50. Gratuity, to R. C. Harriman, Haverhill, for Cotton quilt.

.50. Gratuity, to Miss Fannie Knapp, Newburyport, for Silk quilt.

.50. Gratuity, to Miss I. Smith, Newburyport, for Log Cabin quilt.

.50. Gratuity to Mrs. N. R. Stanley, Newburyport, for Satin quilt.

The Committee found a Finely Quilted Flannel spread that was not among the entries, of which they wish to make honorable mention.

Mrs. H. F. Longfellow—*for the Committee.*

CARPETINGS AND RUGS.

The Committee on Carpetings and Rugs have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$3.00. First premium, to Mary J. Symonds, Salem, for Braided mat.

2.00. Second Premium, to Mrs. Moses E. Cook, Newburyport, for Braided mat.

1.00. Gratuity, to Mrs. Aseneth Sanborn, West Newbury, for Hooked rug.

1.00. Gratuity, to Mrs. H. M. Ricard, Haverhill, for Braided mat.

1.00. Gratuity, to Mrs. B. F. Kelley, Haverhill, for Hooked rug.
1.00. Gratuity, to Mrs. Richard A. Sargent, Merrimac, for Braided mat.
1.00. Gratuity, to Mrs. C. H. Ordway, West Newbury, for Chenille rug.
1.00. Gratuity, to Mrs. B. McAuliff, West Newbury, for Knit rug.
1.00. Gratuity, to Mrs. S. A. Brookings, Newburyport, for Knit rug.
1.00. Gratuity, to Mrs. Hannah H. Knowlton, West Newbury, for Drawn in rug.
1.00. Gratuity, to Mrs. Michael Burke, Haverhill, for Braided carpet.

Mrs. Geo. B. Bradley—*for the Committee.*

MANUFACTURED FROM LEATHER.

The Committee on Articles Manufactured from Leather have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

$5.00. First premium to F. G. Richards, Haverhill, for team harnesses.
5.00. First premium to I. W. Hanson, Haverhill, for Goddard harness.
2.00. Gratuity, to S. Osgood, Georgetown, for head rest.
1.00. Gratuity, to Jackson Webster, Haverhill, for saddle, bridle and whip.
2.00. Gratuity, to I. W. Hanson, Haverhill, for case of harness trimmings.
Diploma to C. K. Fox, Haverhill, for samples of shoes.
Diploma, to H. B. Goodrich, Haverhill, for samples of shoes.
Diploma, to G. C. Howe, Haverhill, for 12 pair shoes.
Diploma, to Hunkings and Wilds, Haverhill, for 12 pair shoes.

Diploma, to L. Johnson & Son, Haverhill, for samples of shoes.

Diploma to Poor & Dole, Haverhill, for samples of shoes.

Diploma to H. H. Hoyt, Haverhill, for 20 pair shoes.

Diploma to F. S. and H. H. Gage, Haverhill, for samples of shoes.

Diploma to Blake Brothers, Haverhill, for button boots.

Frank J. Bradley, James Dewhurst, I. E. Perkins, Aaron Sawyer, F. H. Gulliver—*Committee.*

FANCY WORK.

The Committee on Fancy Work have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

.50. Gratuity, to S. A. Eastman, Haverhill, for towel.

.50. Gratuity, to Mrs. F. S. Newman, Haverhill, for roman skirt.

1.00. Gratuity, to Mrs. H. M. Ricard, Haverhill, for handkerchief.

1.00. Gratuity, to Mrs. E. B. Bishop, Haverhill, for samples of lace.

.50. Gratuity, to Mrs. Mary F. Geyer, Haverhill, for doll.

.50. Gratuity, to S. D. Gage, Methuen, for table scarf.

.50. Gratuity, to Miss Virginia Brisett, Haverhill, for picture throw.

.50. Gratuity, to Mrs. J. F. Ring, Haverhill, for doylies.

1.00. Gratuity, to Mrs. F. Hanson, Newburyport, for infant's dress.

2.00. Gratuity, to Mrs. T. M. Tyler, Lynn, for seven pieces fancy work.

2.00. Gratuity, to Mrs. J. A. Blake, Haverhill, for centre piece, mat, &c.

2.00. Gratuity, to Mrs. Caroline Blake, Haverhill, for table cover and sofa pillow.

3.00. Gratuity, to Marc Ami, Methuen, for twelve sheets, socks and chemise.

3.00. Gratuity, to Mrs. N. L. Sumner, Newburyport, for bolting scarf.

1.00. Gratuity, to Mrs. E. M. Lewis, Newburyport, for lace handkerchief.

.50. Gratuity, to Mrs. Fred J. Morey, Haverhill, for silk table cover.

.50. Gratuity, to Mrs. N. K. Stanley, Newburyport, for cigar table cover.

.50. Gratuity, to Mrs. S. E. Poor, Bradford, for edging.

1.00. Gratuity, to Mrs. David Boardman, Georgetown, for bureau scarf.

2.00. Gratuity, to Bertha M. Larkin, Georgetown, for bureau scarf and doylies.

50. Gratuity, to Nellie Stanley, Newburyport, for scarf.

.50. Gratuity, to M. A. Whittier, Haverhill, for centre piece.

.50. Gratuity, to M. A. Whittier, Haverhill, for tea cloth.

.50. Gratuity, to Mrs. G. W. Walker, Haverhill, for picture throw.

1.50. Gratuity, to Helen J. Yeaton, Georgetown, for pen and ink work.

.50. Gratuity, to Mrs. G. H. Grennan, Haverhill, for scarf.

.50. Gratuity, to Mrs. G. H. Grennan, Haverhill, for handkerchief.

.50. Gratuity, to Mrs. S. A. Hall, Middleton, for lace edging.

3.00. Gratuity, to Mrs. Mary P. Sprague, Haverhill, for table cover.

.50. Gratuity, to Dillie Mullen, Haverhill, for banner.

.50. Gratuity, to Mrs. E. B. Bishop, Haverhill, for balls.

.50. Gratuity, to S. Alice George, Groveland, for apron.

.50. Gratuity, to S. Alice George, Groveland, for table mat.

.50. Gratuity, to Mrs. E. F. Triestler, Haverhill, for doylies.

50. Gratuity, to Dillie Mullen, Haverhill, for Whittier's birthplace.

1.00. Gratuity, to Pauline Edelstein, Haverhill, for two scarfs.

3.00. Gratuity, to Miss Bonney, Haverhill, for case of fancy work.

2.00. Gratuity, to Miss Tapley, Haverhill, for case of millinery.

3.00. Gratuity, to Miss Holbrook, Merrimac, for table cover.

.50. Gratuity, to Mrs. Eben Mitchell, Haverhill, for table cover.

2.00. Gratuity, to E. E. Graves, Haverhill, for case of millinery.

3.00. Gratuity, to O. M. Paulus, Haverhill, for baby's cloak.

Mrs. James How, Mrs. Fred G. Richards—*for the Committee.*

WORKS OF ART.

The Committee on Works of Art have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

1.00. Gratuity, to Gertrude Stanwood, West Newbury-for apples and jug.

3.00. Gratuity, to Gertrude Stanwood, West Newbury, for crayon drawings.

2.00. Gratuity, to Mrs. Henry Sprague, Haverhill, for winter scene.

2.00. Gratuity, to Mrs. M. H. Ricard, Haverhill, for Lake George.

2.00. Gratuity, to Miss S. F. Franklin, Bradford, for Franklin Park.

3.00. Gratuity, to Miss S. F. Franklin, Bradford, for jar and drapery.
1.00. Gratuity, to Miss S. F. Franklin, Bradford, for Japanese study.
1.00. Gratuity, to Miss S. F. Franklin, Bradford, for celery.
1.00. Gratuity, to Miss S. F. Franklin, Bradford, for wood duck.
3.00. Gratuity, to Miss S. F. Franklin, Bradford, for lemons.
1.00. Gratuity, to Helen E. Carew, Methuen, for fruit.
1.00. Gratuity, to Helen E. Carew, Methuen, for Kenoza Lake.
2.00. Gratuity, to Mrs. H. S. Snelling, Bradford, for dog.
1.00. Gratuity, to Mrs. M. H. Ricard, Haverhill, for St. Helena.
1.00. Gratuity, to Mrs. L. A. Dow, Haverhill, for peonies.
3.00. Gratuity, to Marion Warren, West Newbury, for wood carving.
1.00. Gratuity, to Maggie M. Clark, Haverhill, for bull's head.
3.00. Gratuity, to Mrs. J. M. Littlefield, Haverhill, for crayon children.
2.00. Gratuity, to P. Holdenon, Haverhill, for flowers.
2.00. Gratuity, to Miss Carrow, Bradford, for roses.
1.00. Gratuity, to Miss Bingham, Lawrence, for painted china.
2.00. Gratuity, to Mrs. Snelling, Bradford, for painted china.
2.00. Gratuity, to Mrs. B. G. Kimball, Haverhill, for case of china.
3.00. Gratuity, to Miss Farnsworth, Haverhill, for two cases of china.

Ruth Farnsworth, Mrs. B. G. Kimball—*for the Committee.*

CHILDREN'S WORK.

The Committee on Children's Work have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

3.00. First premium, to Ethel A. Chamberlain, Lawrence, for table cover.

2.00. Second premium, to Alice H. Ellis, Bradford, for quilt.

2.00. Gratuity, to Helen G. Sargent, Methuen, for handkerchief.

2.00. Gratuity, to Helen Maguire, Newburyport, for shopping bag.

2.00. Gratuity, to Constance L. Abbott, Haverhill, for jelly.

2.00. Gratuity, to Edith Pinkham, Haverhill, for mat.

2.00. Gratuity, to Susie Walker, Haverhill, for quilt.

Mrs. F. E. Day, Mrs. Isaac C. Day, Mrs. J. W. Chadwick—*for the Committee.*

MANUFACTURES AND GENERAL MERCHANDISE.

The Committee on Manufactures and General Merchandise have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

2.00. Gratuity, to Thomas P. Harriman, Andover, for case horse shoes.

2.00. Gratuity, to A. D. Griffin, Lawrence, for carpenter's tools, 150 years old.

1.00. Gratuity, to P. Hoogerzill, Beverly, for baking pan.

2.00. Gratuity, to Moses Smith, West Newbury, for coll. of birds' eggs and nests.

Diploma, to the Haverhill Hat Company for display of hats.

Diploma, to Jacobs & Co., Haverhill, for display of cloaks, dresses, &c.

Diploma, to Brooks & Co. Haverhill, for carpets and rugs.

Diploma, to Symonds Horse Shoe Co., Salem, for exhibit of horse shoes.

Diploma, to C. H. Cox, Haverhill, for exhibit of flour, grain, and meal.

Diploma, to Chace Bros., Haverhill, for blank books and stationery.

Frank J. Bradley, I. E. Perkins, F. H. Gulliver—*Committee.*

GRANGE EXHIBIT.

The Committee on Granges have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

25.00. First premium, to Haverhill Grange, No. 154.

REPORT.

We were surprised on learning that the Haverhill grange—No. 154 was the sole contributor to the fair as an organization. This exhibit was very commendable, and imposed on the committee the slight and agreeable duty of awarding it the first premium.

Although not strictly in the line of duty of the committee, we did try to learn the reasons that held ten of the eleven granges in Essex Co. aloof in the matter. The prevailing motive seemed to be "too much work." Heretofore, we had supposed that the grangers were a set of workers. Certainly their facilities are ample—so are the prizes offered by the Agricultural Society.

How can a spirit of emulation be aroused among the granges to bring out something like a general effort at the next annual fair of the Agricultural Society ?

Haydn Brown, Sherman Nelson, Mrs. David Warren—*Committee.*

REPORT OF COMMITTEE ON ROOT CROPS.

To the Members of the Essex Agricultural Society:

The Committee selected to examine root crops entered for premium, have the pleasure of submitting the following report:

The number of entries this year was less than usual, being eight, viz.:

John H. George, Methuen, onions; Walter Smith, Methuen, potatoes and cabbage; Crystal Lake Farm, Haverhill, J. J. Marsh, proprietor; E. C. Little, superintendent, mangolds and onions; Kent & Marsh, Newburyport, onions; Dr. J. G. McAllister, Lawrence, cabbage; Maurice H. Conner, West Newbury, cabbage. The Committee desire to thank each competitor whom they had occasion to visit, for the cordial manner in which they were received.

Our first visit was made Sept. 6, at the field of onions entered by Mr. John H. George, Methuen. At the time of our visit the onions had not been pulled, but nearly every onion in the field was thoroughly ripened down, ready for market.

The onions were grown upon a peat meadow—the soil seeming to be particularly adapted to that crop.

Mr. George evidently believes in producing the largest possible crop, on a given area. The rows were a little less than twelve inches apart, and the onions were grown so closely together, that they were literally piled one above another. We noticed several places where from thirteen to sixteen onions of marketable size, were produced upon one foot of the row. The onions when pulled, are not allowed to remain in the field, exposed to

the sun, but are packed in crates or boxes, and placed at once in the storehouse, ready for marketing, thus saving time and labor in handling.

So far as your Committee can judge, Mr. George seemed to have reduced the culture of onions almost to an art.

The same day we visited the fields of potatoes and cabbage entered by Mr. Walter Smith, Methuen. About one-half of the piece of potatoes was grown on peat meadow, and the appearance was rather above the average, for the season. The remainder of the piece was on upland, which was quite rocky, and was hardly an average crop.

Owing to the incompleteness of Mr. Smith's statement, no mention being made of cost of manure, nor to value of crop, your committee do not feel justified in recommending an award.

The field of cabbage entered by Mr. Smith, we did not consider eligible for a premium, as at the time of our visit some of them were headed, large enough for market, while others were but fair sized plants—causing the field to present a very uneven appearance.

Sept. 16, we went to Haverhill, where we were met by Mr. E. C. Little, who conveyed us to Crystal Lake Farm, of which he is superintendent. We spent some time in looking over the farm, which showed evidence of thrift and good management. The piece of mangolds entered for premium looked very finely.

As Mr. Little cultivates comparatively large fields, he finds it better to have the rows sufficiently wide apart to admit of the use of the horse hoe and cultivator in caring for his crops, thus saving much hand work.

On another part of the farm, Mr. Little showed us the piece of onions which had been entered for premium. Here, as in the field of mangolds, Mr. Little believes in having plenty of room to work, the rows being fifteen or sixteen inches apart. At the time of our visit, the onions

had not been pulled, but were generally well ripened, and nearly all were of marketable size. One unusual feature in regard to this crop was, that although a part of the field was in grass in 1892, and was plowed and manured in August of that year, there was no perceptible difference between the yield upon that part of the field, and the portion which had previously produced root crops.

On the afternoon of the same day we went to Newburyport. Here we were met by Mr. Kent, who took us to view the field of onions, entered by Messrs. Kent and Marsh. Here we found that the onions had been pulled but not gathered. Mr. Marsh informed us that in this field the rows were about fourteen inches apart, and judging from the way that the onions covered the ground, they must have grown very thickly. The field was situated on quite an elevation, and the soil appeared to be well adapted to the production of root crops generally. Here, as in all the other fields shown us by Messrs. Kent and Marsh, there was ample proof that the managers understood their business.

Our next visit was made at the farm of Dr. J. G. McAllister, Methuen. Here we found a field of very nice cabbage, all ready for market. Variety, Henderson's Succession. The heads were remarkably uniform in size, and presented a fine appearance. The field gave evidence of having been carefully cultivated, and well cared for.

The last visit of the season was made at the farm of Mr. Maurice H. Conner, West Newbury. Here we found an excellent crop of cabbage, variety, Stone Mason. One point in which we were specially interested, is that Mr. Conner has for several years used seed raised by himself. By careful selection and cultivation he has succeeded in greatly improving the original strain, and producing very deep and solid heads of cabbage.

A comparison of the statements concerning the various crops of onions, will be interesting in showing that under

favorable conditions, onions be planted closer, and better results obtained.

The Committee have inspected all the crops that were entered and after examining the statement of each crop, recommend the following awards:

$10. First premium to John H. George, Methuen, for crop of onions.

$5. Second premium to Kent & Marsh, Newburyport, for crop of onions.

$5. Second premium to Crystal Lake Farm, Haverhill, J. J. Marsh, Proprietor, E. C. Little, Superintendent, for crop of mangolds.

$10. First premium to Maurice H. Connor, West Newbury, for crop of cabbage.

$5. Second premium to Dr. J. G. McAllister, Methuen, for crop of cabbage.

Frederick A. Russell, William S. Phillips, Jr., Albert Emerson—*Committee.*

STATEMENT OF A CROP OF ONIONS RAISED BY JOHN H. GEORGE, OF METHUEN, ESSEX CO., MASS.

The land on which the crop was raised was Peat Meadow. The land in 1891 was in grass, in 1892 there was a crop of potatoes raised on it, manured with chemical manure one ton per acre. In the fall, after the potatoes were dug, there was applied about eight cords per acre of gravel into which had been run ten one horse loads of night-soil. It laid on top of the ground all winter. In the spring it was ploughed in, the ground was harrowed, brushed and sowed with 3½ pounds of Yellow Globe Danvers onion seed. The rows were a scant foot apart, they were hoed five times, weeded thoroughly three times. They were harvested and put into the onion house in ten hours by one man and four boys. The crop was five hundred and

seventeen bushels to the half acre of medium sized onions, very few small ones and none overgrown, no scullions. The manure cost me less than nothing on the ground but for a fair statement I shall call it the price of ordinary manure on the ground. The onions are all sold at an average of 90 cts. per bushel but are not all delivered. They were measured in crates which your committee saw. One hundred bushels topped and the shrinkage reckoned on that basis. The statement is as follows:

	Dr.
To four cords manure on land,	$24 00
" ploughing one half acre,	2 00
" harrowing and brushing,	75
" sowing,	75
" 3½ lbs. seed at $3.00,	10 50
" hoeing five times,	7 50
" weeding three times, 12 days boy work,	9 00
" harvesting,	5 00
" topping and marketing at 3 cts. per bush.,	15 51
" interest and taxes,	3 00
	$78 01
	Cr.
By 517 bushels onions at 90 cts.	$465 30
Less	78 01
Profit per ½ acre,	$387 29
Profit per acre,	$774 58

Respectfully submitted,

JOHN H. GEORGE.

This may certify that I have measured the piece of land on which grew the onions which John H. George entered with the Essex Agricultural Society for premium and it contains one half acre.

WALTER SMITH.

STATEMENT CONCERNING A CROP OF CABBAGES RAISED BY J. G. MCALLISTER IN THE TOWN OF METHUEN, IN 1893.

Hay crop in 1891, no manure; hay crop in 1892, no manure; medium heavy, dry soil; plowed once in 1893, from six to eight inches deep.

	Dr.
Plowing,	$2 00
Harrowing,	2 00
5 cords manure at $5.00,	25 00
Seed "Henderson's Succession,"	2 00
Planting,	2 00
Phosphate, 500 pounds,	7 00
Cultivating,	2 00
Hoeing and thinning,	5 00
Harvesting and marketing,	10 00
Interest on land and taxes,	6 00
	$63 00
	Cr.
By 232 bbls. cabbages at 50c.,	$116 00
" plants sold,	5 00
" 10 loads leaves sold at 50c.,	5 00
	$126 00
Expenses,	63 00
Profit per half acre,	$63 00
Profit per acre,	$126 00

Respectfully submitted,

J. G. McALLISTER.

I hereby certify that I measured the land on which was grown the half acre of cabbages entered for premium by J. G. McAllister in the town of Methuen in 1893.

ABRAM STAVE.

STATEMENT OF MAURICE H. CONNOR, CABBAGE CROP.

The half acre of cabbages entered by me were raised on land that has been in grass for the last five years, the crop last year being about one ton to the acre. The soil is a gravelly loam, the manure was ploughed under in May about six inches deep 25 loads per acre and 400 pounds of phosphate in the hill; the seed was dropped about the 10th of June and cultivated and hoed three times. There were 2925 heads on the half acre and we find by weighing the product of two rods they will average eight pounds each, which would give 46,400 lbs. or 464 bbls. per acre allowing 100 pounds to the barrel.

COST PER ACRE.

Ploughing and preparing land,	$10 00
Seed and sowing,	4 00
Cultivating and hoeing,	16 00
40 lbs. of Bradley's phosphate,	6 50
25 loads of manure,	50 00
Cost per acre before harvesting,	$86 50

VALUE OF CROP IN THE FIELD.

5850 cabbages at 4c. each,	234 00
Profit per acre,	$147 50

I hereby certify that I have measured a field of cabbages entered for premium by Maurice H. Connor and find it contains one-half acre.

MOSES SMITH.

STATEMENT OF A CROP OF ONIONS RAISED BY E. C. LITTLE, SUPT. CRYSTAL LAKE FARM.

To the Committee on Root Crops:

The crop last was beets, carrots and cabbages. The land is a sandy loam; ploughed the manure in last fall at the rate of ten cords per acre, harrowed this spring and sowed the seed the 25th of April. The seed came up well but one side was washed out badly by rain.

FINANCIAL STATEMENT.

	Dr.
To ploughing one-half acre of land,	$2 00
" harrowing,	1 00
" raking and picking stones,	2 50
" sowing seed,	.75
" 3 lbs. of seed, Yellow Globe, raised by Chas. A. Lunt, Newbury,	9 00
" weeding four times,	12 00
" hoeing,	3 00
" harvesting,	25 00
" use of land,	6 00
" manure,	30 00
" topping,	10 00
	$101 25
	Cr.
By 345 bush. onions at 75cts. per bush.,	$258 75
" 6 bush. small ones at 50 cts.,	3 00
	$261 75
	101 25
Net profit,	$160 50

Respectfully submitted,

E. C. LITTLE.

This to certify that I measured a piece of land for E. C. Little and it contained one-half an acre.

HENRY W. LANG.

STATEMENT OF E. C. LITTLE, SUPT. CRYSTAL LAKE FARM.

To the Committee on Root Crops:

The crop of mangels which I enter for premium were raised on yellow loam land, quite rocky. The crop of

1892 was onions; in the fall I spread on about six cords of stable manure and ploughed it in; in the spring of 1893 I gave the land a good harrowing and picked off the rocks. I used Stockbridge root manure, put on with corn planter, four hundred pounds to the acre, the rows being three feet apart. I then sowed the seed with Sargent's onion machine, running in the drills I had previously made with the corn planter. I weeded and thinned them out twice and cultivated them eight times.

FINANCIAL STATEMENT.

Dr.

To plowing ¾ acre and 5 rods of land,	$3 00
" harrowing,	2 00
" marking and putting on fertilizer,	1 50
" 300 lbs. fertilizer,	6 00
" 2 lbs. seed,	1 50
" weeding and thinning out twice,	12 00
" cultivating,	5 00
" use of land,	6 00
" 6 cords manure,	30 00
" pulling and storing,	16 00
	$83 00

Cr.

By 700 bush. of mangles,	$225 00
" 18 loads of tops,	18 00
	$243 00
	83 00
Profit,	$160 00

Respectfully submitted,

E. C. LITTLE.

This is to certify that I measured a piece of land for E. C. Little on which was raised a crop of mangels which measured ¾ of an acre and 5 rods.

HENRY W. LANG.

STATEMENT OF A CROP OF ONIONS RAISED BY KENT & MARSH.

The half acre of onions we enter for premium is on the same piece of land that we entered last year, the treatment being different. We spread 4½ cords of stable manure last fall and let it lay until the spring. It was ploughed April 18th and sown April 24th with 2 lbs. Danvers Yellow Globe and ½ lb. Cracker Onion seed. The seed came up splendid but the maggots thinned them somewhat. Had we sown all Danvers Globe seed the result would have been larger, as we found the Cracker onion not near the cropper as the Danvers. We have had three good crops from the same piece and shall sow it again with onion next season.

CROP.

	Dr.
Ploughing and preparing,	4 00
4½ cords manure at $5.00,	22 50
2½ lbs. seed at $3.00,	7 50
Sowing,	1 00
Hoeing and weeding,	25 00
Harvesting,	15 00
	$75 00
	Cr.
By 404 bush. onions at 60 cts.,	$242 40
Profit,	$168 40

Respectfully submitted,

KENT & MARSH.

This is to certify that I have measured the onion land for Kent & Marsh and find it to contain eighty rods.

CHAS. W. NELSON.

REPORT OF COMMITTEE ON STRAWBERRIES AND OTHER SMALL FRUITS.

The Committee on Strawberries and other small fruits have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

The first visit was made to the crop of B. W. Farnum, of No. Andover, which gave evidence of good management. The crop was large and the vines were in a very healthy condition. The varieties were Charles Downing and Crescent.

The next visit was made to the farm of J. W. Barton, of Danvers, near Hospital. This crop was not so large in proportion to the land cultivated, as that of Mr. Farnum, but the berries were very fine in appearance and excellent in quality. Here we saw for the first time the Beverly in full bearing, a new variety of great promise, of fine form, of large size, good flavor and eminently worthy of cultivation.

The crop of Strawberries on the farm of Fred Stultz, of West Newbury was very good for the season and much skill was manifested, not only in the cultivation and arrangement of the rows, but good judgment also in the selection of the varieties.

The Committee after discussing all the points in relation to the crops visited, agree that the berries of Mr. Barton were larger and finer than any which we saw and his vines were healthy. While duty compels us to award the premium of Ten Dollars to Mr. Barton, still as there is no second premium offered for Strawberries, the Committee recommend that a gratuity of Five Dollars be awarded to Mr. Farnum.

The crop of blackberries entered for premium by Mr. Stultz of West Newbury were very fine and considering the age of the plants, the crop was a very good one.

As there was no competition, the Committee awarded the premium of Ten Dollars to Mr. Stultz.

Chas. B. Emerson, Andrew Lackey, William Hilton—*Committee.*

STATEMENT OF STRAWBERRY CROP, J. WEBB BARTON, DANVERS, MASS.

The piece of land which I enter, bore a good crop of strawberries in 1890 and again in 1891, and after picking, was planted to cucumbers for pickling. The next spring (1892) the plants bearing the present crop were set out. The land is moist, somewhat heavy, but free from standing water.

The stable manure, bone and potash, were harrowed in just before setting the plants. The rows were four feet distant from each other and the plants two feet more or less, in the row. For the most part runners were allowed to grow freely. A few rows were set out in August and kept in "hills" and these were very satisfactory—yet to be successful in getting a good crop of fruit the next year from plants set so late, all things must be favorable for a good growth, and above all, good plants to start with.

A covering of meadow hay was put on in December, removed the middle of April and immediately 437 lbs. of home-made fertilizer applied directly upon the vines.

The first picking was June 19th and the last for market, July 15th. Upon land similar to this many varieties will blight or rust badly. An experiment in spraying with Bordeaux Mixture to prevent this rust did not prove successful. I made two applications with a Knapsack machine and I regret to say I could see no difference between sprayed and unsprayed vines, yet there may have been some good reason for this, and I hope others may not be discouraged from similar experiments.

The varieties were Belmont, Beverly, Haverland, Crescent, Downing, Bubach No. 5, Beder Wood and Warfield No. 2. Of these Beverly in "hills" and Haverland in matted rows were very satisfactory. There were also a few plants of perhaps ten other varieties for testing.

	Cr.
By 3388 boxes sold	$431 73
	Dr.
Ploughing,	$2 25
3 cords manure,	15 00
400 lbs. Bone and 100 lbs. Mur. Potash,	8 00
Labor preparing land and putting on manure,	10 52
2500 plants and setting same,	16 50
Cultivating and weeding in 1892,	37 79
Hen manure,	2 00
Hay for covering and labor,	10 00
Weeding, etc., in 1893,	27 95
Chemicals in spraying,	33
437 lbs. fertilizer in 1893,	7 35
Picking crop,	71 00
Marketing,	50 82
	$257 51
Profit on crop 22,295 sq. ft.,	$174 22
RATE PER ACRE.	
6537 boxes,	$832 81
Cost of production and marketing,	500 94
Net Profit,	$331 87

Respectfully submitted,

J. Webb Barton.

I hereby certify that the strawberry bed entered by J. Webb Barton contains 22,295 sq. ft.

Joshua W. Nichols.

STATEMENT OF BENJAMIN W. FARNUM, NORTH ANDOVER, ON STRAWBERRY CROP, 1893.

The piece of land which I enter for premium on strawberry crop, contains 20 rods. The soil is a gravelly loam, rocky sub soil, sloping to the south.

In 1891 I raised a crop of peas and a crop of barley, putting on plenty of barn manure each time. In May, 1892, set out strawberry plants, Crescent and Downing, the rows being 3½ feet apart, and plants one foot apart in the rows. I kept the weeds out clean, and allowed runners to cover the ground. June 19, 1893, commenced picking the berries, and finished July 12.

	Dr.	*Cr.*
956 boxes of berries, at 12 7-10 cts.		$121 64
Ploughing ground	50	
Setting plants	1 50	
Manure	3 00	
Cultivating and weeding	4 00	
Covering with pine needles	1 00	
Uncovering in spring	50	
Picking 956 boxes at 2 cts.	19 12	
Marketing " " " " "	19 12	
		48 74
Net profit on crop		72 90
Rate per acre:		
7648 boxes		973 12
Cost		389 92
Net profit,		583 20

Respectfully submitted,

BENJAMIN W. FARNUM.

I hereby certify that I measured the land on which grew the crop of strawberries entered by Benj. W. Farnum, for premium, and find it contains one eighth of an acre.

AMOS D. CARLTON.

STATEMENT OF FRED STULTZ, WEST NEWBURY, OF BLACKBERRY CROP.

The ¼ acre of land on which I raised the blackberries which I enter for premium, was wet land, badly run out.

I ploughed it two years before I set the vines and raised the first year a crop of field corn, and the second fodder corn. Let me say, just here, that I selected this particular piece of land, as to location, as carefully as though I intended sowing it to Canada Thistles, for the spreading of blackberry vines into one's field land is a joke not apt to be appreciated.

In the spring of 1892 I ploughed without putting on any manure, and harrowed with a spring tooth harrow. With the plough I drew furrows 6½ ft. apart. I had a compost made of sods taken from the roadside, and I put one shovelful under each plant. Set plants, or vines 3½ feet apart in the row. The variety was Agawam and I planted about 600 vines. I run the cultivator through them several times and hoed at odd times. Blackberries are a thing you can work at all the time or let alone, because the young ones come up so fast, but I tried to keep the weeds out, and young shoots back. In the spring of 1893 I cut them back and set stakes down each row about five rods apart, and nailed around fencing wire onto the stakes down one side of each row and back the other, and trained the vines between these wires. I made a mistake in not cutting the vines back in the fall of '92, the first year they were set. In the spring of 1893 they had grown and tangled so badly that in order to train between the wires I had to cut the vines severely, thereby somewhat injuring my fruit crop for this year, '93. I had to cut off long runners in full blossom. It is a mistake I shall try not to make again. I have them now as your Committee saw, so that I can cultivate easily between the rows. I left about two vines in a place for next year and a few more to sell to cover the first cost of the vines. I should have stated that the first year they were set I raised small crops between the rows, mostly beans, so the loss of land is nothing. It must be borne in mind that a crop like this is different from a strawberry crop, as after being once

started it goes on indefinitely, so that the net profit on first year can hardly be estimated.

		Cr.
400 boxes blackberries		$48 00
	Dr.	
Wire	$6 00	
Stakes and work	10 00	
Picking	8 00	
		$24 00
Net profit,		$24 00

Respectfully submitted,

FRED STULTZ.

REPORT OF COMMITTEE ON GRAIN CROPS.

The Committee on Grain Crops respectfully report that there were six entries, and we recommend the following premiums:

$10. First premium, to C. K. Ordway & Son, West Newbury, for crop of corn.

$5. Second premium, to Newton Jaquith, Jr., Andover, for crop of corn.

$10. First premium, to J. J. H. Gregory, Middleton, for crop of rye.

$10. First premium, to C. K. Ordway & Son, West Newbury, for crop of English hay.

A crop of Rye was also entered for premium by Hartwell B. Abbott of Andover, but owing to illness at the time of harvesting Mr. Abbott failed to make a statement, his crop although perhaps not equal to the unusual crop of Mr. Gregory's, was a good one, and would have been worthy of a premium.

Daniel A. Carlton, John Barker, Peter D. Smith, C. C. Blunt—*Committee.*

STATEMENT OF C. K. ORDWAY & SON, CORN CROP.

This corn was raised on land that has been in grass for 14 years and received no manure, or fertilizer during that time. Plowed the first week in May ten inches deep, and applied six cords of barn-yard manure spread broadcast, and harrowed with Randall Harrow, smoothed with a grain drag, marked three and one half feet each way, planted with a hand planter, May 22, with eight quarts of corn, of my own raising.

There was no fertilizer used on the corn.

The corn looked very well when the committee saw it. Later the high wind and storm broke it down, and damaged the crop very much.

The pleasant fall weather has ripened the corn well. The corn was harvested Oct. 21 and 25.

COST OF CROP PER ACRE.

	Dr.
Ploughing and harrowing,	$6 00
Six cords of manure,	30 00
Spreading and harrowing,	3 00
Seed and planting,	1 00
Hoeing and cultivating,	5 00
Topping corn,	2 00
Harvesting,	6 00
Harvesting Stover,	2 00
	$55 00

	Cr.
Top Stalks. (Corn weighed 5,670 lbs.)	$15 00
Bushels of shelled corn to acre, 81	60 75
Stover,	12 00
Two thirds manure in land,	20 00
Value of crop,	$175 00
Profit,	$52 75

Respectfully submitted,

C. K. ORDWAY & SON.

West Newbury, Oct. 23, 1893.

This is to certify that I have measured the land belonging to C. K. Ordway & Son on which the corn grew, that they entered for premium. It contains one acre.

WM. E. AMBROSE.

STATEMENT OF NEWTON JAQUITH, JR., CORN CROP.

The piece of corn entered by me for premium was raised on ground that in 1891 was in grass and received no manure that year. In 1892 the crop was corn, well manured with barn manure. The present year no manure was used except a small amount of fertilizer in the drill. On the acre 132 baskets or 66 bushels of shelled corn were raised.

The cost of the crop was as follows, viz.

Ploughing,	$3 00
Harrowing,	1 50
Planting,	6 50
Fertilizer,	4 50
Hoeing twice,	4 50
Cutting,	5 80
Husking,	6 50
Carting to Barn,	4 50
	$36 80

Respectfully submitted,

NEWTON JAQUITH, JR.

STATEMENT OF C. K. ORDWAY & SON, HAY CROP.

This piece of land has been in grass four years. It is intervale land on the bank of the river.

It contains two and one half acres, (2½).

The weight of the hay 11,400 lbs. or 5 tons, 1400 lbs., making 2 tons, 560 lbs. to the acre, at $20 per ton.

	$114 00
Cutting and storing,	12 50
	$102 50

Respectfully submitted,
C. K. Ordway & Son.
West Newbury, Oct. 23, 1893.

This is to certify that I have measured the land belonging to C. K. Ordway & Son, on which the hay grew that they entered for premium. It contains 2 1-2 acres.

Wm. E. Ambrose.

STATEMENT CONCERNING A CROP OF RYE RAISED BY J. J. H. GREGORY, IN THE TOWN OF MIDDLETON, 1893.

Crop of 1891 was sweet corn for seed, manured with stable manure, about 4 cords harrowed in and 500 lbs. of corn fertilizer used in the drill. Crop of 1892 was peas, raised for seed and hence ripened. About 6 cords of manure harrowed in, and 500 lbs. of dissolved bone black used in the drill. Soil, a good loam, somewhat stony, of the drift formation. It was ploughed once for the peas about 7 inches deep, and after peas were removed the same depth for the rye. No manure or commercial fertilizer was used on the rye: it fed on what was left over from that applied to the pea crop. One bushel of seed was broadcasted by hand and harrowed in.

COST OF CROP.

Seed and sowing,	$1 00
Ploughing and harrowing,	4 00
Mowing and binding,	4 50
Carting to seed house,	2 5
Threshing,	10 00
	$22 25

VALUE OF CROP PER ACRE.

42 1-7 bushels,	$42 14
4785 lbs. of straw,	35 78
	$77 92
	22 25
	$55 67

Respectfully submitted,

J. J. H. GREGORY.

I hereby certify that I measured the land and noted the weight of the crop of rye that was raised in Middleton, Mass., this year, 1893, on the farm of J. J. H. Gregory, and that the land measured 50,625 square feet, and the rye grain that grew thereon weighed 2,780 lbs. and the straw 5,565 lbs.

C. A. HILL.

REPORT OF DELEGATE FROM STATE BOARD OF AGRICULTURE.

Your delegate attended the fair of the Essex Agricultural Society held at Lawrence, Sept. 27th and 28th. The weather was favorable to success; the programme was carried out in a commendable manner. The exhibition of horticulture, domestic manufactures and works of art, was held in the City Hall, a place easy of access, and well adapted for the classification and arrangement of the various exhibits. Here the exhibitors must have felt that their various offerings were shown to advantage; while the visitor gained instruction and pleasure from the merit and variety of articles shown. The Grange exhibition was in an adjoining hall; the variety and completeness of these exhibits excited universal commendation. Your delegate questions however the wisdom of making the

Grange exhibitions a separate and distinct department. The show of Farm Stock, Poultry, &c., was held in a vacant lot on the bank of the Merrimac river. Here also was the creditable display of agricultural tools, a department worthy of generous recognition in all of our fairs. The Ayrshire herd of Mr. J. D. W. French, of Andover, deserves especial mention, among the numerous entries of dairy stock. The show of horses was inferior in quality. The lack of comfortable stalls, with the absence of a suitable place for showing horses, either to halter or in harness, doubtless dampens the enthusiasm of horse owners to compete at this fair. Your delegate found some of the horses on exhibition confined in their stalls by boards *nailed* in front. It was easy to see how the animal was put in, but how could he be gotten out? As the classes were called, this difficulty was solved by the use of an axe. If our fairs are designed as object lessons in the best agricultural methods, surely methods so primitive and wasteful should be avoided. The poultry exhibit was large, and many fine specimens were shown; an entire lack of classification and arrangement detracted much from its purpose of giving either instruction or pleasure. The drawing contests were shown on one of the rising streets of the city. Certainly the most sensitive could have found nothing here to offend. There was neither the harsh word, nor more cruel whip. Not the extreme limit of strength was called for, but the ability to move heavy loads with firmness and ease. The plowing match, though a mile distant, was a splendid object lesson in this important branch of successful tillage. The Essex Society emphasizes by its generous premiums, its belief that good ploughing is an important step in good farming. I close this hasty report, assured that the Old Essex Society, with its accumulation of wisdom, gained from the Fathers that sleep, and from her sons still loyal and true, needs not the advice of the stranger within her gates. Many of

these sons are asking whether the years of wandering, should not now give place to the permanent home? Does not a wise answer demand a recognition of facts as they exist *today*, not as they may have been fifty years ago?

The above is respectfully submitted by

CHAS. A. MILLS.

FARMERS' INSTITUTES.

The Society held six Institutes and one field meeting during the season of 1892-3, on as many different days forenoon and afternoon, at which the following subjects were opened by carefully prepared essays, and freely discussed by any and all persons present who cared to discuss them, viz:

1. "How to make Poultry keeping profitable."
2. "Cooking."
3. "The advantages of Special and General Farming."
4. "A Brief History of Agricultural work in the United States."
5. "Highways and Road Building."
6. "Fruit in general, and Pears in particular."
7. "Underdraining."
8. "Cranberry Culture."
9. "Poultry."
10. "Milch Cows."
11. "How to make small farms pay."
12. "Experience among Farmers of California."

The first Institute of the season, and 88th of the series, was held at the Town Hall, West Newbury, in connection with the State Board of Agriculture, Friday, Jan. 13, 1893. The subject in the forenoon being "How to make Poultry-keeping Profitable," by Dr. George M. Twitchell, of Augusta, Maine, who was introduced by President Appleton. The speaker prefaced his remarks by saying that as he was a professional man he did not wish his hearers

to get the impression that he was not a farmer, for he was; he had been in practice professionally, but owing to failing health had returned to his first love—the farm. He said he wanted to speak to the every day farmer who made his living from his farm, and not to the fancy farmer, or breeder. We are to talk about an industry that seems small, but yet is one of our leading and most profitable ones. What is necessary for success? In the first place if you want to produce an egg, you must find out the cost of production, and for this one must have a knowledge of the business. There must be an enthusiasm in the work. A man who is a farmer simply because he must be, will not succeed. If you desire eggs you must cultivate your hen accordingly, and a long narrow bird is the desired one. If you want meat then she must be short and blocky. There must be a distinct separation of the two classes, you cannot combine them. I do not think a man as a farmer can breed pure stock at a profit. By the use of grade hens you avail yourselves of the labors of the specialist, without the trouble of attaining that end; In mapping out the business for a year, first have an inexpensive building, say 12x20 costing from $25 to $35, this is room enough for 40 or 50 hens. The rations should be balanced to the needs of the creature. Two things are essential, quantity and quality. It must be easily digested and not too rich in food elements; 40 parts of oats, 40 of shorts, 10 of corn, 5 of scraps, 5 of linseed is a good mixture, which should be steamed over night. If you want to get good results get up and feed them as soon as they come from the roost, feed a little at a time, and regulate it according to the size of your flock. If they are given a large amount, the hens will eat ravenously, gorging themselves with too much food, and you want to regulate this so they will leave nothing, and still have food enough. At noon give them vegetables and at 3 or 4 o'clock a quart of grain to twenty hens will be found suffi-

cient, the question is not how much they will eat, but how much they need. Farmers are really most wasteful because as a rule they feed too liberally. the speaker then described the component parts and elements of an egg, and demonstrated that the hen will perform her duty in such structure if you but give her the proper food to supply them. If you want good eggs you must give healthy food : stimulating foods, such as some of the advertised ones, are bad and produce unnatural eggs, and in the end defeat the object sought. Very cold nights it is bad to give an extra supply of corn as it is slower to digest, and in this connection do not let your hens out in the winter, except an hour in the middle of a pleasant day, as the chill seriously affects their laying : pure air, pure water, and pure ventilation, with cleanliness, is most essential for profit. It followed on these lines, a profit of $2 can be realized on a flock of 25 to 50, $1.50 on flocks from 100 to 500, and $1 apiece for over that. This has been proved by repeated experiments. The best food for chickens is 30 parts corn, 30 of bran, 5 of ground oats, 5 of meat scraps, 5 of linseed mixed with skim milk, and bake hard, pound up and feed in small quantities eight times a day. It has been proved that incubators are not profitable unless you are going to raise from 300 to 1,000 chickens. The speaker then said it was no place for hens on your front door steps, but they want a good run where they can have plenty of work to do, they want to work to thrive, and they want plenty of shade, do not expose them to the broiling sun. A fat hen or a poro one cannot lay well, but a good healthy hen will lay. Just as soon as you can detect the sex of your chickens, separate them, and give the pullets the widest range, and feed the cockerels for the market.

The speaker was interrupted with questions all through his remarks and answered them fully and satisfactorily.

The afternoon meeting was called to order at half past one, when the President introduced Miss Anna Barrows, of Boston, who gave a very interesting and instructive talk on cooking. Miss Barrows perfaced her remarks by explaining that in one afternoon a person cannot get anything more than a birds-eye of cookery, but she would illustrate as far as time would permit. What she proposed to do was to take up the articles of food needed daily and show how to make them more attractive. At first she considered Macaroni with Tomato, fully explaining the composition of Macaroni and dwelling on its nutritious nature: as it is very starchy it should be put into boiling water at once, boiling twenty minutes, after which drain it and put cold water over it, then heat and strain your tomato. We realize the system of better arrangement of our work and for this reason we have applied our cooking school to our school system, where the boys and girls alike are doing most excellent work. In beginning work one should measure out everything before mixing, and in greasing a pan it is a good idea to dust a little flour over it to prevent sticking. All ordinary things like sugar, flour, etc., are measured by the rounded spoonful, and all strong things by the even spoonful. Sifted flour, salt and baking powder are called prepared flour and can be purchased at stores as such. It is well to mix quite a quantity at a time and have it on hand. It is important to measure everything you use in cooking notwithstanding old housekeepers have learned to measure with their eye.

A thin mixture is called a batter, a stiff one dough, and there is a great difference in flour, for bread and pastry, which should be borne in mind. The cooking school is trying to teach judgment, care and forethought. It is only possible to get pupils started in the right direction, not to make trained cooks. She then went on to the finishing of an apple pudding which she had previously be-

gun, and said that in summer it might be used with berries in the same way. In regard to the baking she dwelt at length on the condition of the oven. If it be too hot, a thick crust forms on the dough before it rises; if it be too cold, little bubbles form and the dough falls flat. There are as many different kinds of sauces as there are cake, but they can all be reduced to a simple formula. The plan of work is exactly the same, having the simple foundation it can be treated with an endless variation. The kitchen utensils are improving constantly and growing cheaper in price.

The majority of our homes are painfully lacking in good utensils, and if every home had more it would be surprising to see how much labor might be saved.

In referring to canned goods she said they were all right if used at once upon opening, but on no account should they be allowed to stand in the can exposed to the air.

At this point she urged the use of oil stoves in summer for cooking and heating purposes. By judicious management one can arrange to cook an entire dinner on one of the single oil stoves. She here gave the formula for the sauce to go with the macaroni which she had previously cooked, and also several other receipts so that a person could use up all the odds and ends to make them palatable. In conclusion she gave some most useful and practical hints on bread making, and answered many questions that were asked.

The 89th Institute and second of the season was held at Rockport, Jan. 27, President Appleton presiding, who, after making some introductory remarks introduced Rev. O. S. Butler of Georgetown, who spoke on the "advantages of Special and General Farming."

Mr. Butler said it was a great pleasure to meet the farmers of Essex County and especially so when he saw

so many of the older farmers present. He would speak on the general principles and then on the detail work. We first want to know what is meant by general and special farming. And he would endeavor to clearly define the two. The general farm is what is represented by the typical New England farm of fifty years ago, when the farmer raised very nearly everything he used, sold but little of his produce and exchanged or bartered for desired articles and bought scarcely anything. They had their barns full of hay and stock and everything needful was at hand. No one special crop was raised to replenish the farm or increase the income, but a general production.

Now special farming implies that you devote yourself to one or two special crops, by which you receive your income and to which you devote all your energies. It does not imply that you cannot raise other things for home use. The general farm offers the attraction of a happy home for yourself and children, but the special one is the farm to make money. The man of today to make money must keep step to the music of the nineteenth century, and your profession is as much a one as theology or law. A few years ago our county was dotted over with little shoe shops where a good boot or shoe was made; today this business is all done in large factories, and one man does one part and one another; and it is so in most all branches of business, a specialist performs a certain portion of the work; today you can build a house much cheaper than formerly, owing to the specialist and machinery to complete the different parts, and wages are very much higher. It is so in farming, a specialist in farming can raise more in his line per acre at less cost and more remunerative prices than formerly. Today a man raises one kind of crop and buys the rest as it is more profitable, such as hay, grain and so forth; also the stock farm is equally divided in its limitations, in that

they make money by using their capital and labor in special lines. He dwelt at length on the usefulness of the Amherst experimental station and the benefit derived from sending soils to be analyzed to find out what they are deficient in, so as to properly enrich them. The advantages to young farmers of this line of work are these. —a better selection of soil and a choice of proper implements suited to the crop on this selected soil. If you are going into farming choose one line and make everything bend to it, and you will be sure to succeed.

Mr. Gregory was then called upon and referred very pleasantly to Mr. Butler's address, and said that of all places in the United States suited for special farming Essex County was the best, on account of its closely settled area, its facility for transporting perishable goods, and the demand of the larger cities. He went quite extensively into the various branches of market gardening, and the excellent opportunities his own town of Marblehead offered for certain lines of this very subject.

Mr. Ware was next called upon and took exceptions to following too closely the lines of the specialist. The specialist business may be over done, and if your eggs are all in one basket, where are you; his advice was to be careful and cautious and not to narrow down too much.

At the afternoon meeting the President called upon Vice President Jas. J. H. Gregory to preside, as he, President Appleton was to read an essay, giving "A Brief History of Agricultural Work in the United States.

Organized agriculture in this country dates from the year 1785, when the Philadelphia Agricultural Society and the South Carolina Society were formed. In regard to the latter, nothing definite is given in any readily accessible record, and it appears to have been short lived. The Philadelphia Society had a prosperous and useful existence, having George Washington for an honorary member, he receiving his election July 4th, 1785. In 1791 an

agricultural society was established in New York, and in 1792, the Massachusetts Society was formed under a charter granted by the General Court. Numerous other societies were formed in the years immediately following in the various states. The British Board of Agriculture was chartered in 1793, and soon afterward its president, Sir John Sinclair, in a correspondence with General Washington, suggested that it would be a worthy undertaking on the part of our national government to promote in an official way the interests of agriculture here. Washington replied approvingly, qualifying his remarks by reference to the circumstances of the new country. This letter was indeed prophetic, for it was not until 1837 that anything in the way of official oversight or recognition of agriculture was done under the national government; and even then the initial act was not that of the government, but of one of its zealous officials whose routine of duty pertained to other matters. Washington reverted to the subject in his final address to both houses of Congress, on Dec. 7, 1796.

The Department of Agriculture has now reached a development that calls for an annual expenditure of nearly three millions of dollars and the employment of several thousand officials of various grades; and beside exerting its influence through its publications, distributions of plants and seeds, it finds a field of activity in what are called "experiment stations" in every state and territory in the union. As already intimated its origin is due to the action of Henry L. Ellsworth, the first Commissioner of Patents, who, in his first official report, submitted January 1, 1838, referred to it and in such a manner as to be quite outside of his official purview. The Commissioner's suggestion was not seconded by Congress at once, but on January 21, 1839, the chairman of the Congressional Committee addressed a letter to the Commissioner relative to the distribution of seeds and plants. As an outcome of

this and subsequent correspondence he collected, as far as possible, agricultural statistics from different sections of the country, and presented the same to Congress in his annual report. In consequence of this, Congress on March 3, 1839, approved an act appropriating $1000 for agricultural statistics and other agricultural purposes. This department continued as a sub-department of the Patent Office until 1862, when it was organized as the Department of Agriculture. This frugal appropriation was omitted in 1840-41, but reappears in 1842, and annually until 1846, when it was omitted.

In 1847 it was renewed and regularly continued with some increase from time to time until 1854; but in no year did it exceed $5,500, and generally it was less. In 1854 it was augmented to $35,000, and in no instance thereafter was it diminished. The total expenditure for agriculture, including the printing of the reports, from 1839 to June 30, 1872, was but $2,216,963. In 1867 a building was ordered for the department and was finished the following year, at a cost of $140,000. The appropriation for this department for the year ending June 30, 1892, was $2,814,663.50. A considerable portion of this was applied to the weather bureau service, which, by recent statute, has transferred it from the department of the army where it was known as the "signal service." Here followed a detailed account of the minutæ of the appropriations of this bill, giving a very clear idea of its character and scope. It is very wide in its scope, covering a vast amount of subjects appertaining directly and indirectly to the subject in hand. That part which relates to the quarantining of diseased animals and the spread of the disease is very effective.

In 1862 the first step was taken by Congress toward a provision for agricultural education, in which it granted to each state and territory, complying with certain conditions, public land or land script, to the amount of 30,-

000 acres for each senator and representative to which such state was entitled under the preceding census. It provided for the investment of money received as proceeds of sales of such lands, so that the income shall be applied to endow at least one college where the leading object shall be to teach agriculture and the mechanic arts. Furthermore, in case the capital sum should at any time be diminished or lost, it shall be replaced by the state, and the college is to make an annual report to the Secretary of the Interior. An act approved March 2, 1887, provides for the establishment of agricultural experiment stations to be conducted under the direction of any college established in accordance with the act of 1862. Certain modifications have been made where a station has been established by a state but not connected with a college. By this act $15,000 is annually paid to each state and territory entitled to the same under provisions of foregoing legislation. Here followed a definition of the object and duty of these stations at length. An act of Congress approved August 30, 1890, grants to each state and territory, out of the sale of public lands, $15,000 for the year ending June 30, 1890, and an annual increase of $1,000 for ten years, to be applied only in the instruction in agriculture, the mechanic arts, the English language and the mathematical, physical, natural and economic sciences. By the most recent report of the Secretary of Agriculture there are now fifty-four of these experiment stations in forty-six different states and territories. Alabama has four, Louisiana three, and Connecticut, Massachusetts and New York two each. No other national government has so wide an opportunity for investigation, covering contiguous territory. However much the system may hereafter be expanded and elaborated in its details, its descriptive title will be that of the United States agriculture. There are at present 61 colleges in this country benefitted by these acts of 1862

and 1890. The two Massachusetts institutions are the Massachusetts Agricultural College and the Bussey Institution of Harvard University. There has been an association of the officers of the American Agricultural Colleges, which should not fail to be conducive to that unity of action and uniformity of standard which it is the aim of the Department of Agriculture to maintain.

The State Board of Agriculture consists of forty-five members, four of whom, the governor, lieutenant-governor, the secretary of the Commonwealth and the president of the Agricultural College, are members ex-officio. The working organization of the Board includes also a secretary, a chemist and an entomologist. The forty-one regular members are chosen severally by incorporated agricultural societies. Here followed a summary of the various payments from the state treasury for the agricultural department for the year 1891. Following was a showing of the returns in the secretary's annual report of the various agricultural societies, in which our society was far in the lead for number of Farmer's Institutes. The gypsy moth extermination cost $69.247.55 for 1891 and $75,000 for 1892. In conclusion, he said he had been more and more impressed with the little that was known about this subject, and he strongly advised his hearers to go to Amherst and see the working of the experiment station and thereby get a deal of information.

The 90th Institute was held at the Town Hall, Bradford, Friday, Feb. 10. President Appleton called the meeting to order at 9.30 o'clock, and after a few introductory remarks introduced the speaker, Mr. Lysander S. Richards of Marshfield, whose subject was "How to make small farms pay."

In his preface he said the weather was very unfavorable for the meeting, but he would try and make his subject plain. He had no patent on his topic, and had nothing

new to offer, but was going to tell them simply what had been his experience, not what he had heard or read. He was not born a farmer but was in active business in Boston until he was forty years of age, and then owing to ill health he went on to a farm where he spent ten years in various experiments and failures before he made the farm pay. He said he thought farmers needed a more business knowledge of their work to become successful, a quick perception and action; delay is the cause of many of the failures upon the farm. To begin with planting corn for food for cattle is one of the essentials, and a great many make the error of putting off the planting until too late, thus losing the opportunity of getting it in in good condition. He, the speaker said, would plant as early as the first of May, and take his chances of a frost, and get it in by the middle of September or just as soon as the kernels were hard. All that a cow will eat of corn fodder pound per pound is as good as timothy hay.

He said he fed on corn fodder twice a day and fed hay at night, but what works well on my farm may not apply to others. A chemical analysis of the soil is not feasible, as it only gives you the limited space examined. His farm is a fruit farm, and here he would say, he is surprised to see how few farmers have gardens for household use to supplement the table, as they are a great help in making the farm pay. Strawberries are one of the easiest things to raise in a small way for the family; he raises strawberries for a money crop not for the fun of it. Do not pick your berries too soon, wait until they are all ripe. The trouble is pickers are apt to pick them half grown. Raspberries are also a good fruit for the market and a paying crop. He has known the vines to last for twenty years with good care. You must keep them trimmed and the soil free, do your trimming in the spring. Blackberries do not pay well now, the price is so low, but they are very productive. Currants are also a

good crop and require little attention and should be one of the garden fruits. A good A 1 article sent to Boston market will always meet with a ready sale, while a common article will not. He does not believe in buying Peach trees to set out, but by planting a native seed, good results have been attained. The last crop to dwell upon is that of the hen crop. It is the most important factor in helping out in the winter. The common error is to go into it too largely at first, and with no experience one is almost sure to fail. Better go slow and learn the ways and habits of the fowls before you go into it too largely. He began with twenty-five that paid a profit of one dollar and a half each, and increased it to sixty hens, that paid a profit of two dollars and twenty-five cents each; this he does by both eggs and chicks. In the winter, hens must get to the ground and the conditions must be made as near summer as possible. Brush the snow away and let them get at the grass. Grass is a great promoter to fertilizing the eggs. For the all around farmer the Wyandotte and the Plymouth Rocks are the best breeds. Give them egg producing food as soon as hatched if you want them to lay early. In a word the qualities necessary to make a successful farmer are, a thorough genuine love for tilling the soil, for plant growth, harvesting, care of live stock, and the continuous improvement of his farm. He must be prompt, active, methodical, economical, handy at carpenters' tools, temperate and progressive.

The speaker was frequently interrupted by questions, and answered them as they were asked.

President Appleton spoke at length on various questions suggested by the essay.

At the afternoon session, Mrs. E. V. Gage and Hayden Brown were expected to speak, but owing to illness and unavoidable absence the speaker of the morning was asked to speak again, and he related his experience in California some seventeen years before, and again a year ago.

He found several changes a year since when he was there from his former visit, one of which was formerly manure was considered a nuisance and was deposited on sand roads or anywhere to get rid of it. It is now put in compost heaps, as a noticeable decrease in the crops is discernable, and this manure is necessary for the enrichment of the soil. The ranch life is very primitive, the dwellings poor, nothing such as we would put up with, and not until a man has accumulated a small fortune does he build himself a fair house. If our New England farmers lived as primitively and economically as the Californian ones do they would accumulate money quite as fast. To make a profit, one must cultivate largely, and as an example, he explained the working of a gang plough of six that it would take an entire day to go around a piece once, and about six weeks steady work to plow and sow. Grain raising must be carried on on a large scale, and to do this one must have the modern machines to accomplish it, many of which are very expensive. The barns are slightly different from ours here in the East. All the wheat straw is dumped into them and protected by a railing, then the cattle and horses can go and help themselves as often as they like, eating what they want and then go away. The farms are irrigated by ditches, no rain falling from May to September. The Pacific slope in summer is not an attractive place to a New Englander, who is accustomed to the beautiful green hills. The speaker gave a very full account of the Orange culture in Southern California, and also the apricots, figs and grapes describing the vineyards, their construction, &c., at length.

The 91st Institute was held at the Town Hall, Beverly, Friday, Feb. 24th, the subject for the morning being, Highways and road building, by James Owens of Newark, N. J., who has been a practical road builder for twenty years. Mr. Owens said that probably no one question

was being more agitated, at the present time, than roads and their condition. In New Jersey they have in some localities the same trap rock that we have. The problem is the betterment and improvement of our roads, we must endeavor to give the people a dollar's worth of road for a dollar's outlay. He, the speaker, has had and seen his faults and errors in the past and at first trials, and hopes that others may profit by his mistakes. In 1868, when he took charge of the road work in New Jersey, the roads were but a parody on means of communication. The movement began with the Essex road board, which at first met with much opposition, but power was finally obtained to pave with the Telford process. At that time there had only been constructed dirt roads, no thought of macadamizing having been given to the subject. He here showed a chart illustrating the Telford process of pavements with a foundation five or six inches thick and three inches of broken stone on top which is the best plan. No road should ever be built on a level grade and it should never be less than six inches to the one hundred feet, and as much more up to twelve inches in one hundred feet. The steepness should not be over ten feet in one hundred feet. As to crowning, it should be twelve inches in every thirty feet. Ruts in roads are worse than holes, and constant travel keeps them open and deepens them. The custom of having a steep rise of twelve to fifteen feet to a hundred in hilly roads, is too severe on the horses and should not be allowed and if possible you should eliminate the steep grades in the country roads, which will be a great improvement and will be appreciated. He, the speaker, would lay special stress upon drainage, if a road is well drained it will last much longer and be much better than if water be allowed to stand on or near it. The foundation may be of any obtainable stone, although worn round stone should be broken as a round stone will work to the surface. The foundation should

be laid by hand and placed in position and sledged firmly in place. Before putting on the broken stone, it is well to put on a slight covering of loam, to keep the foundation firmly in place, and after the broken stone is put on, the roller should be kept at work until the road is perfectly hard. Here he gave a brief resume of the New Jersey State road laws in all their workings, from the first up to date. President Appleton invited Mayor Rantoul to speak on the subject of roads and he responded by saying that we must remember that the soil in New Jersey was very much different from the soil in Essex County, Mass. He made a plea for wide tires to wheels which was a roller of itself when going over the road instead of opening a rut and advanced the idea of the county owning one or more of the improved costly road machines and loaning them to the smaller country towns.

The afternoon meeting was called to order at 1.30 o'clock, when President Appleton introduced Hon. Peter M. Neal of Lynn, who spoke on fruit in general, and pears in particular. The speaker began by saying that knowledge is the accumulation in a vast storehouse, and we may, as the Essex Agricultural Society, go there and take out what we will.

Fruit seems to have been the food of primeval man. The peach is superior, however, and what is more delicious than a fine dish of peaches; but pears are of longer duration, he having had pears all the year round. The pear is like sponge cake, and the apple like bread, the staff of life. The pear is the fruit for the few, the apple for the million. By this he does not wish to disparage the pear, but to give it its proper place. Essex County raises more pears than any other county in Massachusetts. As has been said before, Lynn looks like a city that has gone out into the country to spend the summer. The speaker then said he now had too many pears, and too few apples. The pear is a very ancient fruit, three hun-

dred and fifty years before the Christian era it was raised, and Theocrastus at such a time speaks of it in a work on Botany. The pear is not indigenous to America, but was brought here. It was first carried from Syria to Greece, and then to Rome, and from there all over Europe, and from there to this country, and within the last two hundred years many fine varieties have been produced, some of the best of them being of American origin. Do not set out too many varieties, ten or a dozen being enough, that will yield fruit from the middle of July to January. The Bartlett was brought to this country ninety-four years ago this spring, and is a well known and delicious pear. The pear that takes one year with another in the market is the Clairgeau. Its beauty sells it, not its quality. Some new pears promise well: many pear trees live to a very great age, some of them being known to be three or four hundred years old, the well known Endicott pear tree, which still bears fruit, being over two hundred years old. The borer that makes havoc among the apple trees rarely troubles the pear. The lazy man has no right to expect to raise good fruit as eternal vigilance is required to get it. Do not be afraid of a good knife and lop off all the useless branches, and let in light, in peaches it is well to trim off one-half of the last year's growth; pear blight can only be safely treated with the knife. In conclusion he would say that he got lost in the maze of the portico, and did not get beyond the vestibule of that great storehouse and, while telling them nothing new, could only apologize for the time taken up.

President Appleton then made some remarks in relation to insect pests and the method of spraying, laying particular stress on the fact of delicate spraying, not going over the same ground twice, thus washing off what had been previously put on, after which Mr. Gregory spoke on his personal experience in fruit raising, followed by Mr. Manning of Reading, and Mr. Foster of Beverly.

The 92nd Institute was held at the Town Hall, Topsfield, Feb. 17th. The essayist of the morning was the Hon. Jas. J. H. Gregory, of Marblehead, who read a paper on "Underdraining." The speaker said he would consider the improvement of our low land in conjunction with his announced subject, which would broaden his field for treatment. Too large a part of New England is still unimproved. The question now at hand is the best way of handling this unimproved wet land, and it is his opinion that it is in the line of the higher agriculture for the census to take up the topic and give us accurate statistics of land that can be improved and brought into tillage by drainage, dykage and by getting the water out of it. The latter method pays in Holland and the time will come when it will pay here as well. The speaker hoped in the near future the Agricultural College would send out experts to examine this question abroad and report thereon. In this matter of redeeming land one will find it very handy to sound with an iron rod, having a curved handle in order to avail ones self of the rich soil that lies under the surface.

Muck is a vegetable matter that does not decay beyond a certain point. It decays just so far and then the cold arrests it and muck or peat forms. It is very useful therefore as a fertilizer, for the nitrogen does not escape, and it is equal in some conditions to stable manure. It is useful to use with stable manure and makes a rich combination, as the manure warms it and sets the nitrogen free.

In draining land it is well to follow the natural slope of the land as much as possible. To begin with, look for your springs and tap them first. Also look out for your outlet, for if you have none, it is useless to drain your land. No roots can grow in dead water, and what we aim at is to remove it, and where water stands, there can be no decomposition, and only when the water is drained

off, and the sun and heat gets to it does this process take place. It is a question to him whether mucky land pays to till or simply let it go to grass. This is something each individual must settle for himself. In coming to crop lands we find they are pretty difficult to handle. You must dig your drains and put in your tiles and sometimes loose stones, you have to go through the hard pan and it is quite a job to dig it up. The speaker thought it a good plan to bury the useless stone walls on the farms and convert them into drains. For draining there is nothing better than the round tile. The joints will take care of themselves and when once covered the dirt will prevent any spreading or movement of the tile. After the tile is laid be sure to cover with loose stones and scraps of leather or something of the kind and be sure to leave none uncovered over night, as a little rain or any caving of earth might fill the tile and it would not be noticed. There is now a theory of "under-airing" the soil the same as underdraining, that is to get the air into the soil, which is claimed to be very beneficial to the crops. In draining, do not lay your drains over two feet deep, as three or four feet in a dry year will cause the land to suffer from drought accordingly.

Mr. David Warren, of Swampscott, here gave some very interesting personal experiences that clearly demonstrated this, your crops will always be the best just over the drains, and you can readily mark the course of your drains by the crops, especially in grass.

President Appleton spoke in the general line of reclaimed land and also of irrigation, that would be so useful to the market gardeners and horticulturist.

Mr. Emerson, of Haverhill, spoke at length on the question of underdraining and the urgency of knowing how to drain before attempting the operation, so that one will not have to do the work all over again. In draining

near trees, a person must look out for the roots, as they will grow for an incredible distance and will get into a tile drain in a very minute space, and after once there will fill the drain, and choke it so that it will be useless. He advises Portland cement to be put over the joints, and to be careful that they are made perfectly tight.

At the afternoon session, President Appleton introduced Mr. Edmund Hersey of Hingham, who spoke on "Cranberry Culture." He began by saying that it is only known very much about in the southeastern part of Massachusetts. He commenced years ago in an experimental sort of a way. For years he allowed the matter to rest, but twelve or fourteen years ago he looked the matter over again and found out he had made a mistake in not going into it more extensively. He immediately began to take steps to increase his field of area in his part of the state. The berry does not like to grow in too wet land, although some people suppose they require a great deal of water, but this is not so. On the contrary a good sand hill is preferable. There are three things necessary for success; first, drainage, you must be able to drain your meadow; second, sand, that is coarse sand, not the very fine variety, and if this is not obtainable, use fine gravel; and the last condition is water, that you can command at all seasons of the year, so that you can let it on, or drain it off when you like. This proper condition of things he illustrated by a chart, showing a good cranberry lot with its proper drainage, and water supply. You must have good conditions to start with to make it pay. If you strike a spring in your meadow, you must drain it off into the nearest ditch, and in time it will stop of its own accord. You want a sufficient depth of sand on your meadow, if you do not have this, the grass will grow and choke out your vines.

If your sand is handy, 3 or 4 inches is about the right depth and if some grass comes up through this amount

the cranberry vines will grow very rapidly and soon kill out the grass. It is not necessary that the bog should have a peat foundation. Do not spread your sand until you are ready to set your vines, the best time being the last of April or first of May. He does not buy vines nor does he advise any one to do so, but gets the best wild ones he can find. If you must buy your vines do not go south for them, but rather go north as the northern ones ripen earlier than the southern berries do. In buying vines you must look out for insects which will ruin your whole crop. The speaker then answered many questions relative to the topic, by several of the audience, after which a general discussion followed.

The 93rd Institute of this society was held in the Town Hall, Ipswich, Friday, March 31st. The speaker in the morning was O. S. Butler of Georgetown, on Poultry, and in the afternoon Francis H. Appleton, Esq., of Peabody, on Milch Cows.

President Appleton presided, and after a few remarks, introduced Mr. Butler who said to begin with, that he wanted every thing informed and therefore hoped if any one had any questions to ask, they would interrupt him at any time and ask or discuss anything that might occur to them.

The speaker said his experience in poultry raising was not so extensive as some others, as he had never had more than 250 chickens at one time. He desired, however, to handle the subject in a familiar way.

First a person, in order to succeed in any business or profession should have a taste for it. The speaker believed in intelligent action, no forcing of anything whether in the school room or the raising of poultry.

There is something more than the mere keeping of fowl if we would obtain the best results. We should seek for the profit of the thing. One great question has arisen

and that was, whether it was best to use artificial means in the production of chickens, or be content to follow the old and natural method. This depended whether the raiser wished to produce poultry for the early or late market. The speaker in referring to the best breed of fowl, said that he preferred the middle weights, such as the Plymouth rocks, as they were better for early birds.

If it was desired to raise for the late fall market, the larger birds were preferable, say those weighing five or six pounds dressed, as they brought a larger price in the market. If poultry was raised for egg production, the smaller birds should be preferred, because as a rule more eggs were obtainable from them.

The greatest number of eggs which had been found in embryo in a hen was 750. If a hen did not deposit her full quota, it was a question whether it was best to force her to do it. One of the greatest obstacles we had to overcome was in breeding. We should get rid of our crowers every fall and get some from a distance. He sold eggs every spring for hatching, and this helped out the expenses of the hennery very much. His favorite breed was the Plymouth rock. Mr. Butler cautioned all against going into the poultry business on a large scale. Begin in a small way and then the great essential for success — experience, would be secured. Every poultry raiser should thoroughly understand the incubator before using it. Poultry needed two sets of buildings, a summer house and winter house, with plenty of yard room. The buildings should be high and roomy. The roof of the winter house should slant toward the sun to make it warmer. Carbonic acid gas was as dangerous to poultry as it was to people and there is nothing that will create so much carbonic acid gas as a hen. Ventilation should, of course, be from the bottom of the hen house, and the speaker thought the best way to secure it was to have conductors run from within a few inches of the floor to an opening at the eaves, and the draft would take out the impure air

Anything contributing to the healthfulness of the fowl contributed to its profitableness. The speaker did not believe in unnatural development. This violation of nature's law was illustrated in many ways, especially in horses; there were many very pretty to look upon, but when you put them to service they were good for nothing. It was the same with poultry.

Hens and chickens should never go to the roost with empty stomachs, but satisfied. Whole corn was good to feed them at night. If the point to be attained in anything was development, it was essential to begin with the primary condition. The principle held good in every phase and condition of life.

The speaker said that with him the actual cost of keeping a hen a year was from $1.00 to $1.25. Hens would average from 160 to 170 eggs a year. Some hens would lay 200 eggs in a year. Fifteen dozen eggs at 25 cents per dozen and the value of the hen, less the keeping, would be the yearly profit.

The afternoon meeting was called to order at 1.30, by Vice President James P. King, who introduced President Appleton, as the afternoon speaker, whose subject was "Milch Cows." Mr. Appleton began by saying that the cow in her wild state only yielded milk enough to nourish her young for a few weeks after birth or until it can support itself and then goes dry for the balance of the year. In her condition, as we know it, intelligent care and treatment have increased her flow of milk and made her useful to the human family, and have changed her habits in the onward progress of civilization. The natural tendency of the improved animal—our cow of today—is to constantly revert to the natural condition as she was first found by our distant ancestors.

It is only by intelligent treatment, a continuance of good breeding, and all reasonable encouragement in that

direction, that the useful characteristics of our animals can be preserved and advanced. When individual citizens are so busy with their own affairs, for the interest of farmer's prosperity, it becomes a necessary consideration, and a most important one, how the state can best promote the general agricultural interests of her people, by encouraging with instruction and object teaching, those ways and systems that will promote a knowledge of and demand for the best in all kinds of live-stock, including milch stock, and the best results in growing and acquiring their food, as well as how to present it to them injudicious and profitable rations. The housing of animals, food and manurial substances, demand economy in all details, to secure best profits in each case. Constant vigilance in all ways is as necessary to preserve the profit condition of a milch cow as it is of life or anything else in the world.

I want to make it clear that it is as important for our agricultural organizations, experiment stations, and board of Agriculture to constantly direct their efforts toward the promotion of high ideas as to what our live stock of all kinds should be, as it is to endeavor to experiment with methods of feeding the animals, and the crops which they consume. High quality in the livestock brought into our markets and onto our farms, is desirable and profitable.

For one I feel that we can well press forward such efforts. I trust these ideas will meet with favorable consideration at your hands in the discussion that shall follow.

It has been only by many years of constant care with most judicious selection and treatment in localities of most healthful kind, that our breeds of cattle have been preserved and brought to this best known condition in our part of the world. And in the older countries the well known breeds were made possible only by the

enforcement of strict rules and popular demand and constant encouragement, with also public decoration and acknowledgment of successful achievements of real merit, freely given. A highly successful breeder was placed in the front ranks of prominent men. The present source of supply of very many of the cows that make up our milch stock, is very largely from distant breeders, and beyond state limits, of the condition of whose barns we have no guarantee as to their freedom from disease germs, or as to whose care in early training of the live-stock we must be equally uncertain.

If we can only establish a price for milk in proportion to its intrinsic value, shall we not be establishing a value for carefully bred cows that will enable the farmer to secure a price for milk which shall more justly remunerate careful home breeding and milk farming. It seems to me that this suggests more profit to the milk producer and protection to quality in milk.

With less advantageous surroundings for the making of milk in our more thickly populated districts, we find the greatest demand for it and the increased difficulty to secure that milk which is of pure quality and such as meets the wishes of the consumers. One cause is the bad condition of many cow stables which exist in the more immediate vicinity of our cities and large towns, where animals are forced as to kinds of food and fed with the poorest quality of air, and where their surroundings are not otherwise properly healthful.

Such cheaply raised lacteal fluid tends to lower the value of the honest product, coming from the forest and free country atmosphere. Is not this a temptation to some one to extend the quantity to meet the quality that is lower, where the price received per quart is not the best.

The well fed, well cared for cow is at a disadvantage unless the market for her product is directly that of the consumer, or until such time as her product is sold for its

quality and standard. Here we have a work for most thoughtful consumers, and farmers to unite in pressing upon our established authorities that the public may the better appreciate the advantages of pure milk.

REPORT OF COMMITTEE ON TREADWELL FARM.

The Treadwell Farm still continues under the management of L. D. Stanwood as tenant. Everything about the farm appears to be kept in a neat, tidy condition. About the usual amount of hay has been raised this season, 33 tons, potatoes, cabbages, ruta bagas and other vegetables, to some extent. Five acres of ensilage corn of the southern white variety have been grown, producing 81.4 tons at a cost of $3.39 per ton in the silo: to grow this 16.2 tons per acre, five cords of barn manure and 500 lbs. of Ames' fertilizer per acre were applied. Mr. Stanwood is more than pleased with the experiment of feeding the ensilage of last year's production. The new silo built last year has proved entirely successful.

There were three acres of field corn of the Angel of Midnight variety, grown upon the farm this year. Five cords of barn manure applied in the hill, per acre, produced forty-one and one-half bushels and two tons of stover per acre, at a cost of production of $40.25. As it is conceded by some, that good corn stover is worth as much per ton as English hay, for producing milk, and if this is so, which we hardly admit, as hay this year is worth $20 per ton in the barn, it will be seen, that the two tons of stover is worth as much as the cost of cultivation of an acre of corn. And thus Mr. Stanwood gets his corn for nothing, or it may be called his net profit. In considering the value of stover in comparison with hay, some conservative men, while admitting the fact of its being of equal

value, add providing it is all eaten. The committee in this case saw it fed, and were pleased to know that the cows eat it all up. The stock on the farm consists of 16 cows, 5 heifers, one bull and 2 horses.

Respectfully submitted,

BENJAMIN P. WARE, Chairman.

REPORT OF THE COMMITTEE ON IMPROVING WET MEADOW AND SWAMP LANDS.

The same committee has been reappointed by the society for two or three years in succession.

There appears to be at present, very little interest in this important subject—either by the committee, or the farmers at large throughout the county. There have been but two entries made during the last two years, both being by Maurice H. Connor, of West Newbury, for a piece of about five acres of wet pasture or swampy land very near his house. The chairman made several efforts to get the committee together to examine this land in 1892—but no one appeared except Mr. E. Francis Holt of Andover. We did not feel authorized under the circumstances to make any award last year, but this year, as Mr. Connor entered the same lot again, and as no one appeared but Mr. Holt and myself, we thought it advisable to call in a neighbor to our assistance, when we three concluded to award to Mr. Connor the Society's first premium of fifteen dollars. As your chairman is a near neighbor to Mr. Connor, he invited Mr. Holt to make a report, which he very kindly did, as appears below.

STATEMENT OF MAURICE H. CONNOR.

The piece of meadow which I enter for the society's premium contains about four acres. The soil is a dark loam, with a clay and sand subsoil; and was when we begun operations upon it, about six years ago, one of the

roughest fresh meadows in Essex County, having been used for a cow pasture for a number of years previous, and its surface was completely covered with hassocks, clumps of bushes and cranberry vines. In the fall of 1886 we started to plough it with four horses, but found it impossible to find a plough that would turn it over, the sod being so tough it would fall back in the furrow after the plough. We finally obtained a marsh share for the Oliver plough that cut all the roots clean at the bottom of the furrow. After we got it ploughed, the next question was how to get loose soil enough so we could plant a crop. We tried several tools for that purpose, with varying success, and finally succeeded in getting a portion of it ready for fodder corn the first spring; we then planted about an acre each year. After the first year it was comparatively easy to work, and we now have it in long beds, ridged in the centre, from forty to sixty feet wide, with surface drains between each bed, with a good outlet for the water, one-fourth mile in length. It can be ploughed at any time with an ordinary team, and is now bearing a good crop of English hay.

The principle cost was the first ploughing; since then I have been well paid for my labor, by the crops raised each year. The expense per acre was about as follows.

Ploughing with 3 men and 4 horses 2 days	$16 00
Harrowing, 1 man and 2 horses 1 day	4 00
	$20 00

To balance which we have the hay crop for the past two seasons, one and a half tons per acre, worth ten dollars per ton standing.

3 tons of hay at $10.	$30 00

All it needs now, is fertilizer of some sort, and the hay-crop for another year may be doubled.

Respectfully submitted,

MAURICE H. CONNOR.

REPORT OF E. FRANCIS HOLT.

The committee on improved wet meadow lands, having visited and examined the piece offered for premium by Maurice Connor of West Newbury, submit the following. We find in this field the result of courage, persistence and patience, united with good sense and muscle. Four of these qualities should and *must* be the possession of every successful farmer: and the latter if not possessed, is ordinarily attainable at not extreme expense. These facts may suggest to the possessors of many an unsightly and useless piece of land in Essex Co. the possibility with the means within their possession or reach, of bringing the same into a condition that shall make it at once a pleasure to the beholder and a source of profit to the owner thereof. It is in the hope of fostering and encouraging such efforst on the part of such owners, that your committee suggest for Mr. Connor the premium of fifteen dollars. In so doing we do not overlook the fact that the statement of Mr. Connor is not as much itemized or detailed as regards expenses and receipts as would be desirable; but since the premium is for *the improvement in the land*, and your committee are, because of close examination and questioning, satisfied that from the first ploughing it has returned at least and probably more than an equivalent for all expenditures; and is now in a clean, arable condition, ready to give almost unlimited returns for liberable cultivation; they take pleasure in recommending as above.

Respectfully submitted,

E. Francis Holt.

The Chairman would fully indorse Mr. Holt's remarks, and would further suggest, that we consider Mr. Connor's estimates of the cost of ploughing and harrowing rather low, but as it was done mostly with his own team, and with the help of other members of the family, the cost may not to him appear very great; but those of

us who hire all such work done, are fortunate if the cost does not double his figures. Mr. Connor went to considerable expense in making an outlet for the water. A long ditch had to be dug through another man's land, and a bridge across a road was taken up and relaid. As the land is drained wholly by surface draining, we suggest to Mr. Connor in future, the great importance of keeping the drains open — especially that the *outlet* does not become clogged, either by dirt, roots of trees, or coarse grasses. This is of the utmost importance, as through one or two years neglect, the cultivated grasses will be killed out, and rushes and other swamp grasses will take possession. The writer is a firm believer in thoroughly reclaiming these wet, boggy, and swampy places — land, especially, near our buildings, which has been receiving the deposit from the upland for ages, is too valuable to be neglected, or lay idle and useless. Judicious improvements of this kind will pay the farmers of our county, much better interest on the outlay, than western mortgages, or shares in some alluring speculation. In the first place, it is necessary to remove all *standing water*, so that the land may not retain excessive moisture during any portion of the year. *There must be sufficient fall, and a good outlet*, or this draining wet land will ultimately prove a failure.

For several years past, there has been a "Note" inserted in the Committee's book, under the head of waste land and underdraining; thus:

"The committee is instructed to ascertain how many, if any, reclaimed swamps in this County have been abandoned or have returned to natural grasses. Persons knowing of such are requested to notify the Secretary or Committee."

It is quite evident that the person through whose influence this note was first inserted, was not a believer in reclaiming these wet places, or at least had lost faith in its practicability. For one, I can say I have lost no faith in it. Having practised underdraining in a small way for over twenty years, believe now, that careful systematic

underdraining has paid me better than any other investment; failures occur everywhere, but they generally come through carelessness or neglect.

There is a large meadow in full view from the windows where I write, which was forty years ago in the best state of cultivation. Large crops of English grass, grain and vegetables were every year grown upon it. It was drained in the lowest place, through its entire length, by a large deep ditch, perhaps five feet wide and four deep. The land on either side of this large ditch, was ploughed up into beds, with sufficient drains between them, to take the surface water rapidly away. In process of time the main ditch became clogged; willow roots were allowed to penetrate and interlace, till the ditch became entirely filled, and is now grown up to hassocks and bushes. Forty acres of this once valuable land is now used for a pasture, the lowest part cutting nothing but the poorest quality of coarse grass. Is not this a sample of other lands in this county, which were once reclaimed and productive? There is within twenty rods of my own buildings, a rough piece of about five acres of pasture land, which was valued a few years ago at $25 per acre. This land has never been ploughed till the past season, but has been allowed to grow up to bushes and wood. The bulk of the land is a gentle slope to the west, and there is a good fall to a meadow and brook. In the easterly corner of the lot, there has always been a small pond, which was seldom dry. This pond caused about an acre and a half of the best land to be too wet to cultivate, or even to drive over during the early season.

To drain this pond and wet corner, we had to cut a very deep wide ditch, about fifteen rods long, through a ridge of stiff clay, which prevented the water from penetrating through it. The land on either side of this ridge, was very rough; full of large holes that made it almost impossible to mow the bushes. We commenced about

three years ago to drain our land, by striking out a wide ditch with a pair of horses and plough. Next we used a horse scraper, and drew the dirt back, dumping it in holes, from twenty to sixty feet on each side of the ditch. Then by ploughing again and scraping out more dirt, we formed a ditch, some twelve or fifteen feet wide at the top, tapering down to a foot or less at the bottom. Through the deepest rut our ditch is nearly eight feet deep, but the sides are so sloping that grass will and does grow down to the bottom of the ditch. Clover and other high ground grasses came in the second season *without seeding*, so that we cut this present year, on the ditch banks and sides, over a ton of fair upland hay. These ditch banks will not be likely to "cave in," or the ditch to get "clogged."

About four rods below the pond, we built a rough stone bridge, and last year thoroughly *under-drained* the land through and around the pond, about an acre and a half, at a cost of over $100. Below the bridge, we propose to leave this wide, open ditch, about twelve to fifteen feet wide at the top, and slanting down to a foot or less at the bottom. The expense thus far has been over $200, but we have what will be in a few years, some of the most valuable land on the place—all down hill, within a "stone's throw" of the stable.

I should not have gone a mile from home to spend so much on a rough wet piece of pasture, but being right at our very doors, a strong clay and sandy loam — just the land I needed to raise certain kinds of stock upon that cannot be grown to advantage on high land—I think it has been a wise investment.

For the committee,

T. C. Thurlow.

REPORT OF THE COMMITTEE ON FARMS RELATING TO THE FARM OF THE MESSRS. BUTTERS BROTHERS, IN METHUEN.

There were two farms entered for premium this year. That of Butters Brothers of Methuen and the farm of the Danvers Lunatic Hospital.

The farm of Butters Brothers is beautifully situated in the village of Methuen, containing sixteen acres of undulating surface of excellent soil.

With a small exception for kitchen garden, the farm is kept in grass, and with the manure from sixteen cows and three horses applied as a top-dressing, heavy crops are annually produced. This manure is dropped directly into the barn cellar. Sufficient coarse sand from a knoll near by is used to absorb all of the urine so that the manure is of full strength and excellent quality.

The hay crop this year was about thirty tons with six tons of rowen which is to be fed to the stock on the farm.

It will be perceived that this, with the additional grain fed to keep up a good supply of milk, is ample to keep the farm in a good state of fertility.

There is no pasturage, hence the cows are fed during summer with some green grass, and an acre of land was ploughed up after haying and barley sown, yielding a good crop. This was fed green, cut from day to day as needed.

No further attempt was made to grow rye, oats or cornfodder to keep up a succession of green fodder.

The buildings are in good condition, and consist of a double one story cottage which accommodates the two families, an excellent barn of sufficient size to hold the hay crop, and with convenient stable room for the stock.

There is a cellar under the whole barn open at the south, that affords good shed room for the farm utensils.

of which there is an ample supply of modern patterns, and also a receptacle for the manure, as before mentioned.

Each brother owns his eight cows and one horse; the third horse is old and kept for his past good service.

The product of the farm is fed in common; each providing his own grain and retailing his own milk. The farms yielded this year about fifty barrels of first quality apples and thirty bushels of pears, with sufficient vegetables for the two families.

These brothers present examples of apparently enjoying happy, comfortable farmers' homes, the income from the farm being ample to supply all necessary wants, which means to them, what to many would be luxuries. This is done without any hurrying, fretting or anxiety, and presents a happy illustration of what comforts a small Massachusetts farm has to offer for two families.

If these brothers cared to increase their business and profits, the committee would suggest that by building a silo and growing ensilage, with more attention to green crops for soiling, double the number of cows could be easily kept. That the two milk routes might be consolidated and an active young man could with one horse deliver the milk; but as they are satisfied, the committee ought to be.

As no statement of details of the farm management has been furnished as required by the rules of the society, the Butters Brothers are debarred from receiving the premium.

REPORT OF THE COMMITTEE ON FARMS RELATING TO THE FARM OF THE DANVERS LUNATIC HOSPITAL.

ENTERED FOR PREMIUM BY DR. CHARLES W. PAGE, SUPERINTENDENT.

In making this report your committee have in mind the necessary difference in the management of a farm, as

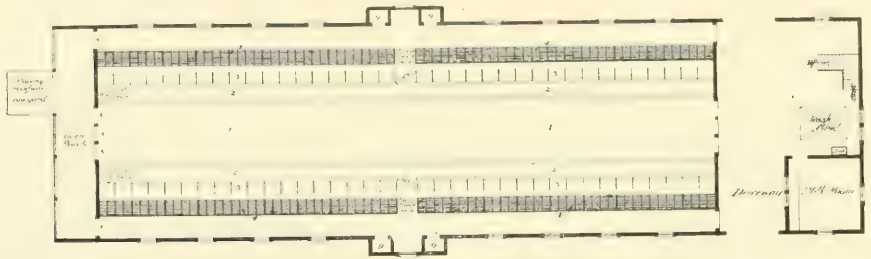
a part of a public institution, cultivated as a part of it, and for its most economic maintenance, and the manage ment of the average farmer who is struggling against many adverse circumstances, such as a want of capital, a glut in the market, caused by overproduction, undue competition, unequal taxation, high price and scarcity of competent labor, etc. These do not affect an institution like the Danvers Hospital, where labor is of no account, except for oversight and direction, and where any required amount of money can be had for the asking. So without making any comparison between the two, your committee will consider the condition of the farm under the several heads as requested by Dr. Page in his statement which follows and is a part of this report.

FARM BUILDINGS.

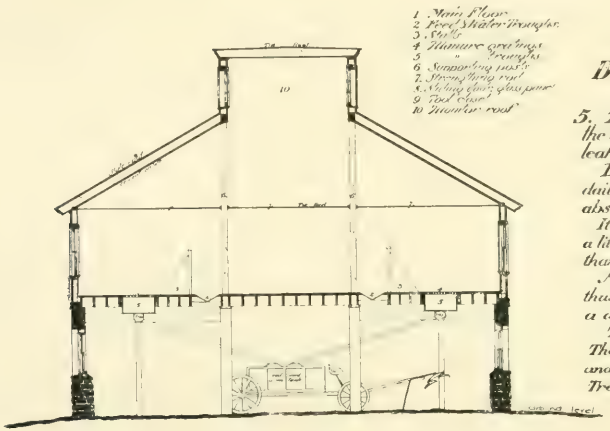
It does a farmer good to see ideal buildings containing all the most approved modern appliances and convenience for the very best condition of all the stock and for the storing of the several crops of the farm ; even if he cannot afford them himself, he can gain some hints by which he may be able to improve his own to some extent. Such may be seen on this farm, and for details reference is made to the very full and complete descriptions in Dr. Page's statement.

But we desire to call especial attention to some striking features of these buildings.

What first attracts the attention of a visitor, is the perfect order and cleanliness, especially in the cow barn, attached as an ell to the main building, at a right angle with it. Here the seventy cows are confined with swinging stanchals in two rows facing each other with ample room between for feeding and behind them for passing. The walls are plastered with cement and tight. Ample provision is made for light and ventilation overhead, so that little or no odor is perceptible. The mangers are watertight so that a stream of water, cold or warm as de-



Floor Plan. scale



Vertical Section scale

Cattle Barn

Danvers Lunatic Asylum.

5. The manure trough is water tight but the trap at the central point is not, but leakage of urine is conducted into a tank.

Loam is sifted into the manure trench daily. This keeps down odors and absorbs nearly all of the urine.

It was found that it was cheaper to allow a little surplus urine to drain away rather than attempt to absorb it all in the trench.

As a matter of fact only a little urine does thus flow away not more than one barrel a day from the seventy cows.

The trench is cleaned as follows:- The manure is all pushed to the central trap under which a cart is placed to receive it. Trenches have to be cleaned every ten days.

DIAGRAM OF COW STABLE, DANVERS LUNATIC HOSPITAL.

sired, can pass through the whole length by turning a faucet, for watering the cattle. When they are fed they eat all that is put before them, so nothing is left; not a straw is to be seen either before or behind them. All droppings take care of themselves through the gratings into a wooden trench, as fully described in the statement. Here every particle of the manure passed is saved and carted upon the land as made.

Now that it is a well established fact that the urine of an animal contains as much plant food as the solid portion it behooves every farmer who allows the half of his manure or at least a large portion of it, to run to waste as many farmers do, to study this object lesson and in some way prevent that great loss.

No well appointed farm is without a silo. Here is one, near to the cows and yet wholly separated from them, with five hundred tons capacity suitably divided into sections, with all the necessary appliances for unloading the corn for ensilage, cutting and carrying it to the several divisions of the silo, all done by steam power, of which there is an ample supply.

Besides the cellar under the cowbarn, there is an excellent cellar under the main barn, offering ample room for storing the large quantity of roots and vegetables that are grown upon the farm.

The new piggery is just finished, and occupied by breeding sows. Already there are between three and four hundred pigs and more coming. The litters average eight or nine each, and all looking in fine, healthy, growing condition. This building is constructed on a somewhat new and novel plan, containing sixty breeding pens. Hogs are cleanly animals if they are allowed a chance to keep clean; and here the opportunity is given to prove themselves so, which is done most effectively. The Stewart's self-clearing grate and downward draft (see statement and plan for particulars) are a complete success; for not only

are the hogs and pigs strictly clean, but there is little or none of the odor that usually pertains to a hogpen and that renders them so objectionable.

The new hennery just being completed is admirable in design and contains all the modern appliances for the successful production of eggs and poultry for which there is ample demand in the Hospital.

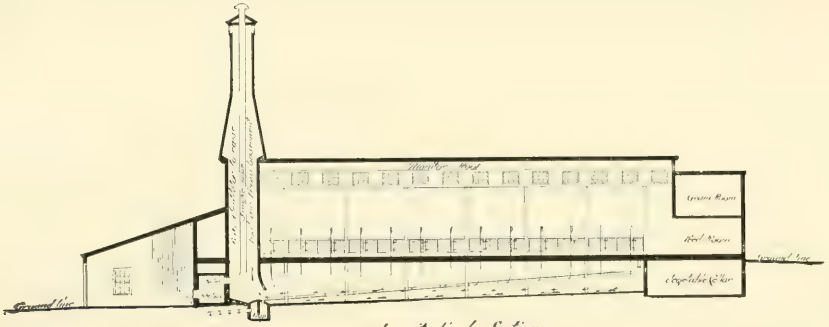
STOCK RAISING.

Statistics prove that at least one half of the milch cows kept in New England and probably throughout the country do not pay for their keeping, requiring a large part of the profit of the other half to make up the deficit, which of course lessens immensely the profit of the dairy in this country. All of this may be changed by more careful breeding and slaughtering at once all found not to yield profitable returns.

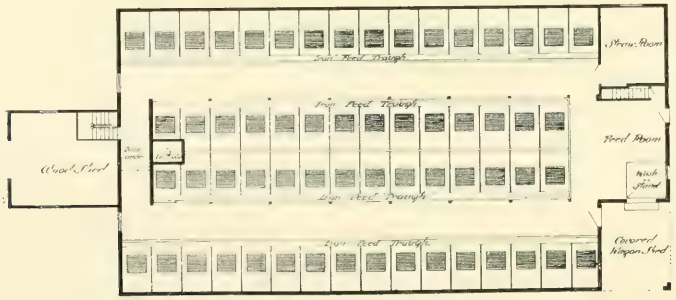
The committee are much pleased with the plan adopted on this farm of raising the heifer calves from the best cows, and by the use of a thoroughbred bull. And they feel that it cannot be too strongly urged that success depends more upon the bull being selected from the best milking strain, as it is unquestionable that the sire is more potent to transmit milking qualities than the dam. This fact is often overlooked in breeding stock for dairy purposes.

There is always more or less danger of introducing tuberculosis or other infectious diseases by the purchase of stock from sources that may be infected. Dr. Page is of the opinion that grade or full blood Holsteins are less subject to tuberculosis than other breeds. By raising calves from stock not infected, that danger which is quite considerable is avoided.

The young heifers that have been raised are certainly very promising, but until they come into milk, their milking qualities cannot be assured; hence the importance when a bull has proved a getter of good milking stock, he should be kept and made much of. Bulls are usually



Longitudinal Section



Floor Plan. Scale

Piggery
Danvers Lunatic Asylum

Designed to secure perfect downward ventilation and dry floor. Air is excluded from cellar, except as it flows down through iron grates in the centre of each pen. Arrows thro' iron grates in each pen show direction of air currents.
The ventilator opens bell shape two feet above cellar floor at its lowest point.
Iron smoke pipe thro' centre of ventilating shaft insures strong draft.

DIAGRAM OF PIGGERY, DANVERS LUNATIC HOSPITAL.

slaughtered before their real quality is proved, so that the benefit of a very superior animal may be very limited.

The general average production of the cows is remarkably good, eight and six-tenths quarts, actual product, per cow; but so many changes have been made, the average of a herd of the same cows for one year is not given, which would if possible, be of much interest.

By referring to the accompanying statement it will be noticed that these have no pasturage and that their summer feed (with the usual amount of grain) consists mostly of green rye, oats, peas, and barley, grown as they should be in abundance for a full supply.

The committee are of the opinion that a judicious system of soiling in the summer season with a liberal supply of ensilage in the winter, is by far the most economical method of producing milk.

The committee noted the general good appearance of the stock that has been purchased as well as raised upon the farm, which indicates excellent judgment in selection, both in purchasing and breeding, for really successful breeding is one of the fine arts, dealing in the most subtle forces of nature; and we learn with pleasure that the credit of this belongs to the farm manager, G. L. Barnes, who shows equal ability in the conduct of the general farm management.

FARM PRODUCTS.

The committee observed with much interest the experiment of topdressing in renovating grass land with hard wood ashes and several brands of fertilizers; they saw the good effects on their visit in June, just before the grass was cut.

There are many fields of grass situated like those around the Hospital where it is undesirable to have them ploughed up, and this experiment confirms what had been shown in other localities, that grass land may be kept in good productive condition indefinitely by top dressing with

either manure or commercial fertilizers. One of the most successful farmers in Worcester manages the whole of his large farm in this way. And yet in the ordinary system of farming, where hoed crops and grain are cultivated, it is better to have grass included in the rotation.

HAY.

The committee desire to call attention to the fact that in all cases of weights of crops given in the statements, that actual weights are given, no estimates, as is too often relied upon, in many reports. So that the twenty-five and four fifths tons of first crop and seven and one-half tons second crop making a total of thirty-three and three tenths tons or three and two-thirds tons per acre grown on nine acres of land was the actual weight. This is a remarkable crop, without top dressing.

Previously this land was for two years cropped with ensilage corn, showing that the heavy manuring given those crops was felt in this result and the committee think it very likely as this land had formerly received the benefit of sewage irrigation, some credit should be given to that.

It will be observed by referring to the statements accompanying this report, that heavy manuring and a liberal use of commercial fertilizers is the system adopted which produces large crops, in some instances extraordinary. Of course in most cases the crop does not consume all of the plant food of the manure applied, and it is a question how much of the cost of the manure applied should be charged to the crop grown, but in as much as the cultivated land is supposed to be well supplied with plant food of previous years application, we think it is fair to charge each crop with the fertilizers applied each year; of course the land will continue to increase in fertility, as all good husbandry requires.

The crop of four hundred tons of ensilage grown on twenty acres of land is a good crop, but not extraordinary, and reckoning the manure, which was of first quality, at

five dollars per cord on the land, which is not a high price, and the fertilizer at cost, with labor of men at one dollar and a half a day, and a team of a pair of horses and two men at five dollars per day, cost in the silo four dollars and seventy-four cents per ton notwithstanding the use of the best machinery for the handling of the ensilage.

The average cost of ensilage in the silo by accounts kept by fourteen growers in Essex county ten years ago, was two dollars and sixty-three cents per ton. The same year from the accounts of many growers the cost varied from ninety-two cents in Nebraska to four dollars per ton in Lawrence and North Andover.

The fact of planting the Leaming corn accounts for what would seem a moderate crop considering the amount of fertilizers used, while this variety does not grow so large stalks as the Southern White, it is more prolific in ears, hence yielding a better balanced ration and of more feeding value per ton, and is growing more popular among prominent ensilage growers.

POTATOES.

The experiment with the potato crop is exceedingly interesting and well worthy of a careful study of the method of growing an early crop. Those which were dug in July yielded at the rate of two hundred and forty-eight bushels per acre, followed with a second crop of first class cabbages. By this system the early crop, which usually suffers in quantity with the earliness of the planting, averaged more than any of the later seeded lots.

ONIONS.

The product from one and three hundred twenty-five one thousandths acres was one thousand four hundred and thirty-four bushels of the very best quality of onions, equal to one thousand and eighty-two bushels per acre. A yield unprecedented in Essex county or anywhere else so far as is known by the committee.

This and all other crops of vegetables were grown absolutely free from weeds, but as the weeding is done by the patients, which cost nothing, our fellow farmers need not feel that we are reflecting upon them by stating this fact. Doubtless the crop was aided by it however.

By accident, the sowing machine cast more seed than was intended, six pounds per acre were sown; in this instance it proved fortunate, as the fourteen cords of first quality manure, which doubtless was sufficient to carry the crop through, and with the addition of sixteen hundred pounds of Bradley's fertilizer per acre, insured ample supply of plant food for this enormous crop. Under some circumstances that large quantity of seed would have been disastrous. A large portion of the crop would have been much under size. A photograph of the whole crop as it laid upon the ground may be found in the accompanying statement. To see the crop before pulling, in continuous rows of onion piled up one upon another, some of the top ones were crowded up three or four inches from the ground, was a sight worth going miles to see.

The committee saw with much satisfaction the various crops of vegetables on their two visits, in their early growth and when ready for the harvest, and were surprised at the uniform success of all of them; for we usually expect more or less failures, and we learn that this success is due to the skill and good judgment of Ettoré Tassinari, who has for several years been known to members of the committee as a florist who has shown great skill in artistic designs with which the grounds about the Hospital have been decorated, and this year he has surpassed his previous efforts. The two lions made up of growing sedums are wonderful specimens of artistic gardening. We would also especially commend his successful management of the rose and pink culture in the greenhouses. For detailed accounts of these crops we urge a careful study of statements attached to this report.

The most remarkable instance of reclaiming land in Essex county or probably in the state has been going on at the Hospital farm ever since its occupancy as such. The whole northerly slope of the hill on which stands the Hospital was literally covered with boulders and stones, which have been gradually removed and the land converted into fertile and productive fields. This has required a great amount of labor, which has been, and is possible by having a large number of patients, whose most successful treatment requires more or less labor.

Within two years this improvement has been applied to about fifteen acres of certainly the most forbidding lot of all; covered not only with boulders and stones of all sizes, but trees and bushes, but by the indefatigable efforts of Mr. G. H. Barnes, the farm manager, with his corps of patients who are willing to work, and the necessary hired labor, backed up by nine yokes of heavy oxen and a liberal use of dynamite, good progress has been made. A few acres were planted this year and a prospect of the whole being cultivated next season. Some seven thousand tons of rock have already been dug out and used in building a necessary road through the lot, filling in foundations for the piggery, hennery, etc.

It is a rare sight of late years to see oxen at work on the farm. While it is conceded that ordinarily horses are better adapted to our cleared fields; but for work in clearing such land as this, oxen are obviously better, requiring three yokes to draw the heavy plough through the stones and roots. Besides there is an economy in their use; for as here practiced, thrifty cattle are purchased, fed and worked in such a manner that they continue to gain in weight, and at any time, or for any reason can be slaughtered for use at the Hospital; so that their labor costs little or nothing.

SEWERAGE.

Probably no problem has proved so difficult to solve by the more civilized nations than as to the best method of dis-

posing of sewage made necessary by the introduction of water into the cities and its free use by the people.

Many costly systems of sewerage have been adopted and proved complete failures or unsatisfactory.

The discharging of sewage into rivers and harbors has resulted in their pollution and becoming sources of sickness and death.

Clarification by precipitation is not purification, as six sevenths of putrescible matter may remain after clarification, as analysis proves.

A commission appointed by Parliament, composed of Messrs. Dennison, Frankland and Morton reported :— "That the actual resources of chemistry do not permit the hope that the polluting matter of sewage can be precipitated and sent away by the appliance of chemical reaction, and unless new chemical laws are discovered it is useless to attempt the employment of chemical agents. Epuration must be confided to Dame Nature."

I. Babut du Maris says .— "Millions of dollars have been expended in France in chemical experiments on sewage, all of which have been condemned."

Thirty years ago in an address before this society Hon. Darwin E. Ware said :— "The subject of sewerage has vital relations to progress of civilization. Through the sewers of cities discharging into the ocean, the highest properties of the soil are irrecoverably lost. The turbid currents of the North River, the Thames and the Seine are richer than Pactolus with its sands of gold. For that which is pollution to their waters, is the touch of magic to the fields and the power of food for successive generations of men. The invention of a plan by which the slime and sediment of cities can be transformed into corn and wheat gives scope for one of the most beneficial systems of economy yet devised."

Liebig said of the cloaca of Rome discharging into the Tiber :— "That it swallowed up in a few hundred years all

that could make the Roman peasantry prosperous, and when their fields were no longer able to produce the necessaries of life for the Roman people, then were the riches of Sicily, Sardinia and the fertile coasts of Africa irretrievably sunk in this cloaca."

"The value of this material as a fertilizer is obvious, but it has been comparatively estimated, and put beyond controversy by the experiments of the Prussian government reclaiming lands with sewage of Dresden and Berlin. Land which without any application yielded but three for one of seed sown, and seven for one when treated with common barn manure, yielded fourteen for one when fertilized with sewage." Many other equally good or better results from judicious irrigation of farm lands with sewage might be named.

Many cities in Europe are adopting this system as the only means of disposing of it, that does not endanger the health of the people, and at the same time save the immense amount of plant food otherwise lost. The experience of Rome is a lesson that should be heeded by all modern cities, as it effects the future prosperity of the nation.

Dr. Earnest Hart has recently said: —"Within thirty years Great Britain has expended five hundred million pounds sterling, for adopting a system of sewage irrigation of the soil, with the result of making the country practically cholera proof, besides the benefit of utilizing the plant food otherwise wasted.

It may be asked, what has all this to do with the management of the Danvers Hospital farm? Much; very much. For that institution, in common with other institutions of the state, has been troubled with the vexed question of "What can we do with the sewage"? Several attempts have been made. The first, made by the civil engineers employed by the Building Commissioners was a complete and expensive failure.

The second, it was thought by members of this committee, would prove a solution of the whole difficulty, which

was by means of conducting the sewage along the brow of the hill by troughs, to be distributed on the surface as needed, the land being previously underdrained; and it did remarkably well for a time, as many crops that took this society's first premiums proved; but this land being naturally wet and heavy, soon became clogged by an oversupply and resulted in a nuisance.

The third attempt was to purchase, adjoining the farm, a five acre lot of barren, sandy land, which absorbed large quantities of the sewage and has brought the field into a state of fertility; but there is a limit that cannot be exceeded, and this field now cries enough; for the present at least. Of late, most of it has been conducted through a ten inch drain pipe off the premises and it gradually finds its way into Ipswich river and this will soon be cause for complaint.

The next plan is an ingenious device adopted by Dr. Page, to turn the sewage into a system of underdrains in the fifteen acre lot, being reclaimed as previously described: for particulars see diagram attached. By this system it will be observed that it is subirrigation, none coming nearer the surface than eighteen inches, as this land is of a somewhat sandy or loose nature about four or five feet deep, resting on hardpan, it will absorb an immense amount of sewage; and as the getting rid of it is the superintendent's main object, he will doubtless succeed in that respect, and unquestionably by capillary attraction it will rise sufficiently to prevent any hoed crops or grass from suffering from drought, and supply a portion of plant food, but probably much the larger part will be lost.

Subirrigation is practised in California, in fruit growing, with good success, especially in Fresno county where grape-culture for raisins is extensively and successfully conducted.

In the manifest zeal to get rid of the Hospital sewage, it is hoped that the former forty or fifty acres that were

treated with the surface irrigation will not be wholly overlooked, so that a larger portion of the three thousand dollars' worth of plant food contained in the annual flow from this institution may be used.

This valuation is shown in the following calculation contributed by J. Q. Evans, a member of this committee:—

At our request samples of this sewage were taken and analyzed by Dr. Guessman, and a review of the figures are most interesting. All the sewage from this Hospital containing one thousand people, together with the water from the sinks and washrooms amounts to one hundred and fifty thousand gallons daily.

This sewage contains in million parts, nitrogen, 28 parts; potash, 33 parts; phosphoric acid, 12 parts.

An estimate for a day's run shows that 33.6 lbs. of nitrogen, 39.6 lbs. of potash, and 14.4 lbs. phoshoric acid are each day carried away in the sewage from this institution; while in a year there is the enormous loss of 12,226 lbs. of nitrogen, worth at 15 cents per pound—$1,839.60, 14,445 lbs. potash worth at 5½ cents per pound—$794.47, 5,256 lbs. phosphoric acid worth at 7 cents per pound—$367.92, a total value of over $3,000 of plant food in the sewage. Compared with one of the best known brands of commercial fertilizer, this sewage for one year contains more nitrogen than is found in 200 tons; more potash than is found in 100 tons; and more phosphoric acid than is found in 20 tons of such commercial fertilizer.

It will be noted that this sewage is especially rich in nitrogen, and to this is undoubtedly due the lodging of grass crops; excess of nitrogen causing a rank growth of a soft nature, while the small amount of phosphoric acid might fail to produce a full amount of grain in proportion to the straw in such crops.

One of the difficulties to a better use of this sewage has been the naturally moist condition of the soil, which is of a heavy clayey character, the water not leaching down readily. Dr. Page is at present engaged on a field

of some fifteen acres better adapted to this work, where by a system of covered drains the sewage can be diffused through the soil. A complete diagram of this work has been prepared by Dr. Page for this report. We are pleased to note the deep interest he is giving to this experiment, and are satisfied that with his characteristic energy he will give this problem of sewage utilization a most careful trial, and the results, be they favorable or unfavorable, will prove of interest as bearing upon this important question, "What shall we do with the sewage of our cities and towns, at present allowed to flow into our rivers?" and carrying disease along their course to the ocean.

An important feature of this system of sewerage is the construction of a separating basin at the highest point on Hospital Hill possible, being now constructed, and is sixty feet long, about six feet wide, and ten feet deep, with numerous compartments substantially built of brick, laid in cement, under ground. (See plan attached.) By this means the sewage will pass into the pipes and drains free from all clogging matter, a great improvement over the usual method of distribution. The plan contemplates a stone drain, similar to those in the fifteen acre lot, to extend around the Hospital hill on a level with the top of the separating basin, so that the sewage may be turned either way as may appear necessary for the better distribution of it. By this plan it is hoped that the fifty acres on the slope of the hill may receive the benefit of sewage irrigation.

It is gratifying to the committee to be able to present to the society so much of progressive agriculture, as the report of the conduct of this farm offers. For which, we make the merited award of the society's premium of thirty dollars.

Benjamin P. Ware.
James P. King.
C. C. Blunt.
Geo. B. Bradley.
John M. Danforth.
J. Q. Evans.

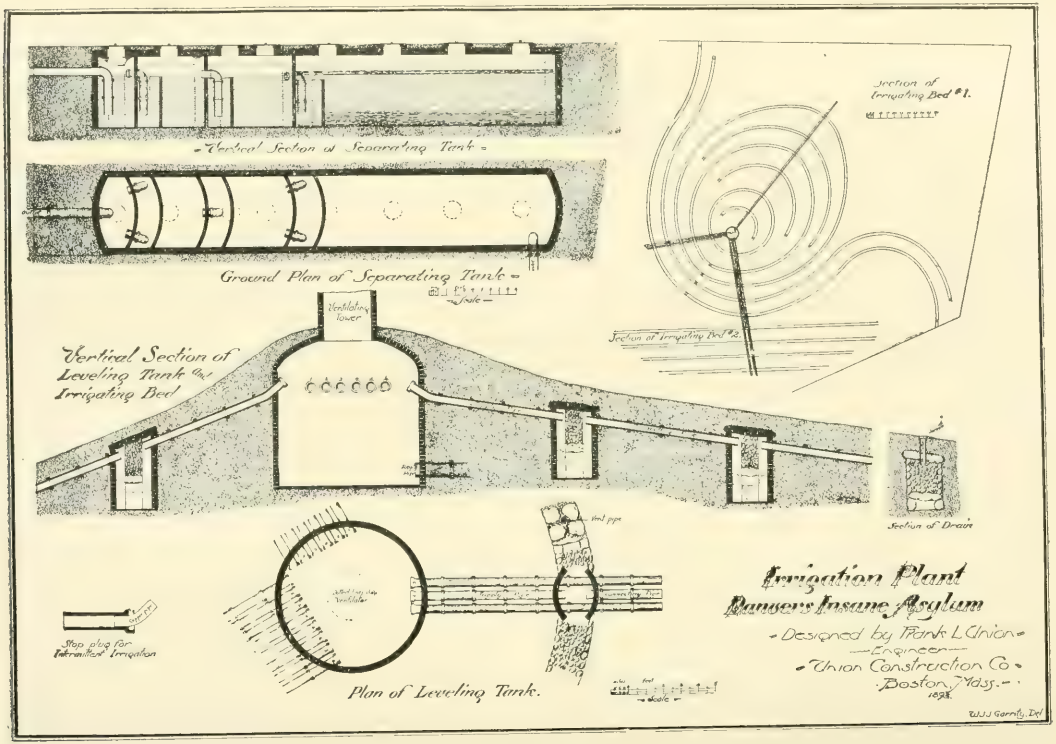


DIAGRAM OF IRRIGATING PLANT, DANVERS LUNATIC HOSPITAL.

REPORT ON FARM OPERATIONS. DANVERS LUNATIC HOSPITAL, NOV. 1, 1893.

To the Committee on Farms, Essex Agricultural Society.

Gentlemen:

In asking your committee to pass judgment upon the operations of the Danvers Lunatic Hospital farm the management desires you to consider the following points, viz:

1st. The improved farm buildings.
2nd. Stock raising.
3rd. Products of the farm and garden.
4th. Reclaiming wild land.
5th. Improved sewerage and irrigation system.

IMPROVED FARM BUILDINGS.

Two years ago the plan to raise on the premises all the milk required for hospital use was decided upon. Previous to that time about one half the milk consumed in the hospital had been purchased from neighboring farmers at an average annual cost of about $3,000.00.

Additional stable room for 70 cows became necessary, and re-fitting the old barn seemed unadvisable for the reason that bovine tuberculosis had existed in the stock for several years.

The new cow stable is a monitor roof, one story, L, 120 feet long.

This arrangement insures quiet for the cows and an atmosphere comparatively free from floating dust.

The cows are ranged in two lines facing each other, their heads being 14 feet apart.

The stanchions (chain swivel) in use permit great freedom of motion.

The mangers are simple V shaped depressions in the floor. Twice a day a valve is turned and a stream of water flows through the entire length of the manger and is finally conducted into an outside drain. By this plan one man can water all the cattle in the barn, 125 head, within 15 minutes. The floor upon which the cows stand is perfectly flat. The hind feet of the animals when standing, rest upon the Stewart self-cleaning stable grate. These grates cover a tight trench made of plank, 3 ft. wide and 2 ft. deep, sufficiently large to hold the dropping, for from 10 to 14 days. All the solid and liquid manure falls through the grating. At least once a day dry loam, always kept on hand, is sifted upon the contents of the trench to absorb liquids and obviate foul odors. Ground plaster is also used in the same way. No straw is used for litter, so the grates never clog. This system keeps all the fertilizing properties of the manure under perfect control, and there need be no loss whatever. It insures perfect cleanliness of the animals and the purity of the milk.

When the trenches are filled, a trap in the bottom at a central point is raised and the contents, on being pushed to the opening, fall into a cart set below, to be taken directly into the field.

349 cords of this full-strength manure were removed from the trench during the year.

It was found best to allow the excess of urine to drain into pans and a lead lined tank on wheels set in the basement, rather than attempt to absorb it all by the use of loam. The tank holds about 500 gallons and as this is filled only once in ten or twelve days by the 70 cows, it is certain that the larger part of the urine is absorbed by the earth and other solid, or semi-solid, contents of the trenches.

When the liquid tank is full, it is drawn out and discharged through a sprinkler upon grass land. The grass thus stimulated makes a surprisingly vigorous growth and

no farmer who has once observed the results of this method would rest easy so long as his barn liquids were allowed to leach away to no purpose. The re-modelled stables for young stock and oxen are fitted with the same self-cleaning grates. When care is exercised in shoeing oxen they soon learn to handle their feet on these grates without tearing off shoes.

PIGGERY.

The new piggery containing 60 pens was designed to secure dry floors and perfect ventilation. An iron grate, Steward's self-cleaning, 4 x 4 feet, is inserted in the floor of each pen. Through these grates liquids, manure and foul cold air fall to the cellar below. A steady downward draft can be maintained in cold weather, as air is excluded from the cellar except as it passes through the grates and the circulation is kept up by a foul air lifting shaft which opens (bell shape) 2 feet above cellar bottom at its lowest point and runs up (6 feet square) through the roof of the building. This shaft is heated by an iron smoke pipe, from the boiler fire box, which passes up through the entire length of the shaft.

In warm weather when all the doors and windows are open the air currents are reversed and a strong up draught is maintained through the grate in each pen giving great comfort to the hogs.

Hot water pipes for heating enter half the pens, so a comfortable temperature can be maintained in winter.

The cellar floor is made of concrete and pitched 3 feet in the length of the building.

This incline accelerates the current of cold foul air along the cellar floor towards the mouth of the foul air lifting shaft. It also causes the liquids to gravitate to the low point where a trap and drain pipe lead to an outside tank or compost heap. Experiments will be made to prove the value of liquids thus collected when sprinkled upon grass land.

HENNERY.

A hennery 198 feet long has been located in the rear of the piggery, also a brooder 40 feet long fitted with hot water pipe from the piggery. A boiler has also been set up near at hand. There are no original fixtures or combination of fixtures in these hen and chicken houses, but an attempt has been made to adopt the most approved plans.

2ND, STOCK RAISING.

The management of the farm stock has been in the hands of Gaius H. Barnes.

Three years ago raising promising heifer calves with a view to improve our herd of milch cows assumed considerable importance. By the aid of our accurate milk record the best cows are easily detected and by keeping pure blood bulls successful results can be pretty safely assured.

We have kept Holstein and Ayrshire bulls. On the average one heifer calf a month is selected to be raised.

The cows are mostly grade Holsteins, but there are a few full blooded Holstein cows.

Oct. 31, 1893, the farm stock was made up as follows:

100 cows.

36 heifers, from 1 to 3 years old.

1 Holstein bull.

10 horses.

85 brood sows.

350 pigs.

9 yoke of oxen.

The value of the stock increased $1800 during the past year.

Management of the farm, the farm buildings, stock, farm proper, land clearing, grading, etc., is under the supervision of Gaius H. Barnes, head farmer.

The vegetable garden and horticultural department are under the supervision of Ettore Tassinari, gardener.

FARM BUILDINGS, DANVERS LUNATIC HOSPITAL.

The most valuable product of the farm is milk. During the past year 243,837 quarts were produced, which at 4 cents per quart, was worth $9,753.00. The quality of the milk was excellent. At no time during the winter had it any peculiar barn flavor or odor.

Because of the many changes in individual cows during the year, poor ones being disposed of and new ones being purchased, as opportunity offered or required, it would be manifestly unfair to assume that the 100 cows now on hand have been contributing to the whole amount of milk for the whole year, and yet estimated upon that basis the daily average for each day of the year is about 7 quarts for each cow. As a matter of fact the number of patients in the hospital rapidly increased the last quarter, necessitating the purchase of many new cows late in the year.

MONTHLY MILK PRODUCT.

		Aggregate.	Daily average.	Daily average for each cow.
1892.	October	19,358.87	624.48	8.67 qts.
	November	17,914.37	597.14	8.18
	December	19,436.84	676.94	8.47
1893.	January	20,346.19	688.59	8.41
	February	19,334.18	690.50	9.72
	March	20,004.01	645.29	8.60
	April	18,137.58	604.58	7.55
	May	20,590.56	664.21	8.40
	June	20,068.64	702.28	9.36
	July	20,885.56	673.73	9.35
	August	22,218.81	716.73	8.43
	September	24,542.00	818.00	8.60
		243,837.61		
Total daily average per cow,				8.64

HAY.

120 tons of good English hay were cut and stored previous to July 15th.

Because of the early drought, the 2d crop of hay was light, only 15 tons being stored. During the season 125 tons of green fodder—grass, rye, barley, oats and peas — were cut, and fed immediately to the cows in the barn. 25 4-5 tons of good hay were cut in June, and 7 1-2 tons of 2d crop in August, from one lot of 9 acres, being an average of 3 2-3 tons per acre. This land received no dressing during the year.

The largest quantity per acre, and the best in quality of all the hay cut came from a small lot seeded the previous year at the last hoeing of the ensilage corn, then growing there.

Some experiments with top dressing were undertaken.

TOP DRESSING WITH ASHES.

The grass on the lawn surrounding the hospital had run out, and it was desirable to bring in new growth without ploughing.

In the early spring four acres were cut up by running a dice harrow several times over it. Ashes, 100 bushels to the acre, were then spread, grass seed was sown, and the whole rolled down. In June a fine crop of hay, averaging 2 tons to the acre, was cut from that land.

Of course we expect even better returns the coming season from the same land.

COMMERCIAL TOP DRESSING.

Other sections of the same lawn were treated with grass fertilizers. Three varieties were used in sections side by side. The hay grown in carefully selected half acres in each section was weighed with following results:

Bradley's	Fertilizer section		2120 lbs.
Bowker's	"	"	practically same.
Odorless	"	"	much less.

SEEDING DOWN WITH ASHES.

2 3-4 acres planted with potatoes on Bradley's fertilizer in the spring, were seeded down with rye and grass seed

in the fall of 1891, after ashes at the rate of 100 bushels to the acre had been applied. A good crop of rye followed in 1892, and from the same land July 1, 1893, 16,741 lbs. dried hay were cut, this being at the rate of 3 tons, 451 lbs. per acre.

ENSILAGE.

20 acres—yield 400 tons.

Land was prepared as follows:

10 cords of manure, (mostly from horse stable,) to the acre were ploughed under.

Leaming corn was planted with phosphate, 400 lbs. per acre, between the 30th of May and the 15th of June.

Bradley's fertilizer was used on 1-2 the field.

Bowker's " " " " the other half.

*150 days' labor (man), and 100 days' labor of team (man and two horses,) were required to plant, cultivate, harvest and put in silo the 400 tons ensilage.

*This is only hired help and some of the work was done by hospital patients.

POTATOES.

5 acres of land in 4 lots. Whole yield—886 bush. 1st lot, 5-8 of an acre, (in garden) early potatoes, transplanted from cold frame, May 1st. Dug in July, yield 156 bushels. April 1st, the seed was placed 5 inches apart on a bed of coal ashes. A light covering of loam was sprinkled over the seed. As rapidly as the tops came through the earth, additional loam was sprinkled over them, until there were from two to three inches of earth held together by a mass of rootlets.

It was a late season, and too dry at a critical time for a heavy yield, but the experiment shows that it is possible to get early potatoes two weeks sooner by this, than the ordinary method of planting.

2d lot, 5-8 acre, (in garden) planted the usual way the 7th of May. Dug in August, yield 146 bush. The land in both lots was prepared as follows: 8 cords stable manure to each acre were ploughed in and 200 lbs. Bradley's potato manure, to the acre, was used.

Immediately after the potatoes were dug, on 1st lot, cabbages were planted, on 2d, turnips were planted.

3d lot (on farm).

3 acres yield 412 bu. The turf on this lot was well broken up and pulverized with disc harrow in May. The lot was divided into 3 portions of an acre each.

15 bags Bradley's Fertilizer costing $24, were applied to 1 acre, yield 147 bush. 14 bags Mopes Manure, costing $28, applied to 1 acre, yield 135 bush.

20 bags Bowker's Fertilizer, costing $32, were applied to 1 acre, which yielded 130 bushels of potatoes.

Aside from the use of different fertilizers, the land was treated alike. The drought came at a critical time, preventing a full crop.

Cost of Fertilizers for whole field, $76.

Cost of Labor for whole field, $50.

These potatoes were planted and dug with machines.

4th Lot (on farm). 1 acre pasture-land broken up and planted in June—6 cords of compost from piggery, sawdust, &c., and 8 bags of Mope's Manure were applied to the acre,—yield 975 bu.

ONIONS. (Garden.)

Land 1 325-1000 of an acre,—yield 1434 bush.

This equals 1082 bush. to the acre.

14 cords mixed stable manure to the acre were ploughed under early in the spring. At time of planting 1600 lbs. of Bradley's Fertilizer were applied. Seed was sown April 12th. The machine threw the seed freely, and used about 6 lbs. to the acre. Doubtless the liberal use of seed is a necessary requirement to secure a large crop.

Onions throughout the whole field grew to a fine size and fully ripened.

The quality of the crop was excellent.

One bushel sent to Mass. Horticultural Exhibition took 1st prize on this point.

Sworn statements as regards size of field, number of bushels, &c., are hereto appended.

ONION FIELD, 1893, DANVERS LUNATIC HOSPITAL.

1082 BUSHELS TO THE ACRE.

A photograph of the onion field was taken, and is he re with submitted.

I hereby certify that I surveyed the Danvers Hospital Onion Bed, and that it measured 1 325-1000 acre.

ANDREW NICHOLS.

COMMONWEALTH OF MASSACHUSETTS.

ESSEX, ss. DANVERS, Oct. 31, 1893.

Then personally appeared the said Andrew Nichols, and made oath that the foregoing deposition by him subscribed is true.

Before me,

WEBSTER F. PUTNAM, *Justice of the Peace.*

I hereby certify that one thousand four hundred and thirty four (1434) bushels of onions grew this year in the Danvers Hospital Onion Bed which was measured by Mr. Nichols.

ETTORE TASSINARI.

COMMONWEALTH OF MASSACHUSETTS.

ESSEX, ss. DANVERS, Oct. 31, 1893

Then personally appeared the said Ettore Tassinari, and made oath that the foregoing deposition by him subscribed is true.

Before me,

ANDREW NICHOLS, *Justice of the Peace.*

CABBAGES. (Garden.)

Land 2 1-4 acres—yield 22000 good heads.

The land for early cabbages was prepared as follows: 10 cords stable manure and 400 lbs. Bradley's Potato Manure were applied to each acre.

Cabbages were set out after early potatoes were dug in the same lot.

The whole crop was satisfactory, having firm, large heads. Specimens took 2d and 3d prizes at Mass. Horticultural Exhibition.

PEAS. (Garden.)

1 2-3 acre yielded 289 bush. 10 cords of manure per acre were used. Planted April 15th. Squashes and Tomatoes were raised on same land for 2d crop.

BEANS. (Garden.)

1 acre—planted May 12—yield 289 bush.

Same land was planted with squash seed, May 20.

PARSNIPS. (Garden.)

1 acre, yield 700 bushels.

CARROTS. (Garden.)

½ acre, yield 450 bushels.

BEETS. (Garden.)

½ acre, yield 600 bushels.

Land for parsnips, carrots and beets was prepared as follows. 8 cords of stable manure to the acre were ploughed under in early spring.

TURNIPS. (Garden.)

As soon as potatoes were dug, 1000 lbs. Bradley's potato manure were applied to each acre and seed was put in. Yield 600 bushels.

MANGLES. (Farm.)

50 tons.

SWEET CORN. (Garden.)

1 1-2 acres,—yield 5,000 dozen ears.

10 cords of manure per acre were ploughed in, and 400 lbs. Bradley's phosphate were drilled in with corn. The field was planted in sections. 10 days elapsing between the planting of each section. The corn gradually became fit for the table through a period of two months at least.

TOMATOES. (Garden.)

2-3 acre, yield 600 bushels ripe, 200 bushels green tomatoes. Plants were set between rows of peas and beans, May 15.

SQUASHES.

1st lot, (garden) yield 11,490 lbs.

2nd lot, (farm) on new pasture land broken up in June. ½ acre was planted 25th June, about 5 cords cow stable manure having been applied, yield 3 tons of good squashes.

CUCUMBERS. (Garden.)

Cucumbers and pickles, 150 bushels.

RADISHES. (Garden.)

11 bushels.

SPINACH. (Garden.)

154 bushels.

LETTUCE.

415 bushels. At least three fourths of it was raised under glass.

COST OF FARM OPERATIONS.

It is impossible to make close figures with regard to cost of farm labor here as there are from 25 to 30 patients employed on outside or farm work.

FLORICULTURE.

As must be well known to your Committee, Mr. Tassinari has, besides the vegetable garden, a greenhouse and a large number of flower beds to care for.

The flower beds this year aggregated one solid acre, and at least 35,000 plants were required to fill the beds and execute the floral designs.

Roses, pinks, etc. in abundance have been furnished the hospital wards throughout the year from the greenhouse. Fine roses averaging 6 dozen a day were cut through the winter. About one half the labor on the flowers has been performed by patients.

RECLAIMING LAND.

All our efforts at reclaiming land for the past eighteen months have been applied to the fifteen acre lot at the foot of the hill lying northwest of the barn and the gas house.

This land has been cleared of trees, brush and stones. Probably no piece of land in the county, more densely covered with large and small stones, was ever cleared for tillage purposes.

The stones removed and piled up weigh 7000 tons. However the committee have seen this field and appreciate how near completion is the work of clearing. It seems certain that the whole will be cultivated another season. In connection with this labor of reclaiming, another plan has been decided upon, namely a Sewage and Irrigation System.

SEWAGE.

Sewage disposal has been a vexed question at Danvers from the time the hospital was located.

The original plan to discharge all the hospital sewage through a direct main into the Ipswich river, one mile west of the buildings, was forbidden by a special act of the legislature before the hospital was opened for patients.

A plan for downward filtration was then adopted. About one acre of land near the barn was thoroughly underdrained by tile.

Upon this irrigation bed the sewage was discharged intermittingly by an elaborate system of tanks, sluice chambers, and wooden troughs. After a few months use the scheme became a failure, partly for the reason, no doubt, that the bed was not large enough.

However that may have been, the plan was not considered feasible and the wooden troughs were removed to the brow of the hospital hill and joined end to end making a continuous line about one mile long.

By the use of simple gates, sewage could be made to flow over the top at any point upon the sloping fields below. In this way surface irrigation could be applied to about forty acres of land. The proper management of this system required pretty constant attention and while for short periods, liquid thus distributed improved the fer-

CENTRAL FLOWER BED, DANVERS LUNATIC HOSPITAL.

tility of the land, for the greater part of the year it was a plain nuisance upon the clay soil of the hospital hillside.

The next step involved the purchase of a field about one mile distant, upon the surface of which the sewage was poured for about five years.

The soil being of a light gravelly sort it answered the purpose for a time, at least the sewage was out of sight.

Recently the owners of adjoining property have complained of the injury done their land by the volume of water which flows over their borders and it seems necessary to make a radical change. If the town and cities lying between the ocean and this hospital would combine with us to build a trunk sewer to deep water, our share of the expense might be considered well invested. But as there is no probability that a trunk sewer will be built through this section of Essex County, steps will be taken to dispose of our sewage on a piece of new land through a process of sub-surface irrigation.

Fifteen acres of rough pasture land have been cleared of trees, brush and stones. Through this land three lines of 10 inch drain tile surrounded with beds of stones have been laid 5 feet below the surface. The whole field eventually, one-half immediately, will be filled with blind ditches about 15 feet apart. These ditches will be dug 4 feet deep and 2 feet wide. An open space 8×8 inches at the bottom will be formed by stone with small stone piled above. Earth will be filled in for the upper 18 inches.

There will be from 5 to 7 miles of such ditches in all. The ditches will be built in plots, no two ditches connecting except by a tight jointed pipe at the top level of stones.

Sewage will be received into and distributed from a tank at the highest point of the field. Seventeen lines of 4 inch pipe radiating to all parts of the field leave this tank at the same level thus insuring the distribution of the liquid evenly throughout the field.

Each radiating line terminates in its individual plot emptying into the blind ditch on the highest level in the plot.

When the first ditch is filled with sewage to the top line of stones, the connecting pipe will conduct the surplus to the next lower ditch. In order to promote the purification of the sewage as well as increase its value as a fertilizer, these blind ditches will be ventilated. At the dead ends of each ditch a hand hole will be brought to the surface, the external opening of which will probably be reduced to a diameter of 2 inches. A tube or chimney stack will be erected over the man hole of the distributing tank at the center of the field. This tank is located at the highest part of the field and will be filled with warm sewage, so there seem to be all the requisite natural conditions to insure circulation of air in at the dead end manholes along the main distributing pipes to the distributing tank.

The shaft will be 20 feet high, more or less, as required to promote free ventilation in connection with an intermittent flow of sewage.

By this method it is expected the sub-soil of the whole field will be constantly saturated and act as a filter and that practically pure water will percolate into the under drains. This system would seem to promise great agricultural returns as an irrigation scheme. We hope to properly clarify our sewage and obtain the most surprising crops of grass, corn or vegetables from this field. The field is al-already partly ditched.

If kitchen grease, solid matter and sludge can be separated from the sewage and kept from these blind ditches, this system of sewerage will certainly solve our trouble over sewage disposal when a sufficiently large field shall have been ditched.

To accomplish the screening process a new separating tank, about 50 feet long will be built of brick according to plans by, and under the direction of Mr. F. L. Union, engineer of the Union Construction Co., Boston, who holds patents upon sewage tanks. Mr. Union also superintends the ditching and pipe laying in the field.

Diagrams of separating tank, ditches with connecting pipe and field plots are herewith submitted.

CHARLES W. PAGE.

DANVERS, Nov. 1, 1893.

REPORT OF THE COMMITTEE ON ESSAYS AND FARM ACCOUNTS.

The committee have had an unusual amount of manuscript submitted to them this year, some of which they have been obliged to decline, not because it was uninteresting, but because it did not come strictly within the rules by which the committee are controlled. The committee find it to be an unpleasant duty to return manuscript which is the result of much thought and labor, but it is necessary to do so when their instructions do not enable them to accept it.

The only "Statement" submitted to the committee is that of George A. Rogers, of North Andover, upon "The Comparative Value of Crops as Food for Cattle." For this valuable paper the committee award the first premium of ten dollars.

The committee have awarded the first premium of fifteen dollars to Dr. J. W. Goodell, of Lynn. Under the title of "The Possibilities of Ten Square Rods" the essayist teaches the doctrines that in New England, now-a-days, the farmer can obtain better results from a small area, well tilled, than from a large area cultivated in the old ways. This is doubtless true. It has been shown by experience and experiment that, with the use of modern improvements in tools and fertilizers, "Ten Square Rods" will yield more profit than was got from the same area in former times. This would certainly be so in a county like Essex, where large markets are near at hand, and the best prices can be obtained for agricultural products. Essex county is now the most populous county in the

state, except Suffolk, and its large cities, Lynn, Lawrence, Salem, Newburyport and Haverhill, by their handy markets and large demands stimulate "market-gardening," and make a few rods, scientifically treated, more valuable than broad acres are in sparsely settled regions. The case may be different outside of New England, in the agricultural states. Doubtless in the Dakotas, for instance, large farms cultivated by machinery, rather than small patches of vegetables and fruits, cultivated by hand, are better adapted to their conditions. Dr. Goodell's essay contains some excellent suggestions.

The second premium of ten dollars is awarded to Geo. A. Rogers, of North Andover, for his essay upon "Farm Bookkeeping—its Necessity." The suggestions in this essay are excellent. No business whatever can be carried on with safety or profit without a true account of it being constantly kept. The simpler the account is the better, for usually farmers are too busy to do much bookkeeping—but they can keep memoranda in proper form, if the details are not made too cumbersome. Mr. Rogers states what points, in his opinion, should be covered.

Respectfully,

G. L. Streeter, Chairman.

Committee:—Gilbert L. Streeter, Salem; D. E Safford. Hamilton; N. M. Hawkes, Lynn; G. B. Blodgette, Rowley; J. M. Danforth, Lynnfield.

THE POSSIBILITIES OF TEN SQUARE RODS.

BY J. W. GOODELL, M. D., OF LYNN.

Many years ago, we remember to have read an article in some agricultural paper, entitled, "Ten acres enough," and the substance of that paper has been often called to mind, by the frequent lamentations which come from the rural agriculturist, with his boundless acres of unproductive land.

There appears to be an uncontrolable desire on the part of many of our farming fraternity to possess all that adjoins them.

Not for its intrinsic worth, or the desire or expectation of utilizing the same, or for speculative motives. In fact the owners themselves could give no good reason for continually spreading out instead of concentrating their fences. They even do not appear to have taken into consideration the cost of fencing their endless domain. We feel assured that we speak within the bounds of truth and facts, when we declare that there are thousands of acres in N. E. which was never worth the cost of enclosure. In fact it was never designed for any other purpose than to help hold the world together. We believe if all the farmers who are now trying to cultivate from thirty to fifty acres, should put all their fertilizer and labor onto one-half, or even one-fourth of the land, their net incomes would be materially increased. That which would have been considered farming land twenty-five or thirty years ago, would not be considered such at the present time. The hand labor of those days could be used to advantage among the stumps, rocks and on the steep hillsides, at ten to twelve dollars per month, or fifty to seventy-five cents per day, with one dollar in hay time. But with the present price of labor, such land could be tilled only at a loss. Divers machines have been brought into use to do this labor, but the land must be cleared of stumps and rocks and made smooth. Even with all of these modern inventions to assist the farmer in making and harvesting his crops, on the prairie land of the far west, where nature has prepared the land for the machines, the results are not encouraging.

We find by the crop reports of 1893, that the average yield of wheat is only 11.3 bushels per acre. Barley 21.7, and oats 23.5 bushels. Certainly this cannot leave a satisfactory dividend, after deducting all necessary ex-

penditures. We have no doubt that if all the labor was put onto one half the land, the net profit would be increased. These desirable results cannot be obtained by indifferent methods of cultivation, or a limited amount of fertilizer. All plant food must be saved and utilized, not, at is too often the custom throughout the rural districts, thrown out onto the ground, to be washed, leached and dried until it is hardly worth the cost of hauling onto the field.

The first requisite for successful farming in N. E. is a good high open barn cellar, with cement bottom, high and open, that a tip cart may be driven in and dumped. When the agricultural chemist tells you that the liquid excrement of the animal is of about twice the value of the solid, you will comprehend the vital importance of the cement or clay puddled bottom, where the perfect Composting of all refuse can be done. Frequent forking over will hasten and assist fermentation, which will kill many of the foul seeds, and save you much labor in the field.

If after each forking over, the pile should be sprinkled with a little land plaster, much of the ammonia would be prevented from going to waste.

By this method you will obtain a perfect plant food, at much less cost, than from the venders of commercial fertilizer in the market. The best results from commercial fertilizers is obtained by applying in the hill or while the crop is growing, a little at each time of cultivation.

Whatever kind of fertilizer is used, it should be thoroughly incorporated with the soil as soon as possible after its application.

Within a few years we have noticed certain agricultural writers advocating the method of hauling green manure direct from the stable in winter, and spreading it on the ground or snow, as the case may be. This method may be *penny wise*, but it is certainly *pound foolish*.

A little time and labor may be saved, but it is indeed a small compensation for the great loss by drying winds

and soaking rains. If the ground be frozen hard, most of the liquid from leaching cannot soak into the ground, but flows off into the streams and is lost.

In the matter of fall plowing, we have noted that the custom is growing in favor and should be encouraged. If done at the proper time, one object of this fall plowing is first, to help on the spring work, second to leave the ground in such a condition that the frost shall do as much as possible in pulverizing the hard lumps of earth, third, and we consider the most important, the turning up of worms and their eggs, to the full action of frost, sun and rain.

This work should be done as late as possible. If done too early, the fall rains will pack the earth, and the worms will regain vitality sufficient to burrow themselves again where they will be uninjured by the action of frost, and very little will be gained.

The plowing and preparing of the soil for the seed, is a matter of vital importance; we object to the proportion of the furrows of the average farmer, too *long* and too *wide* for its depth. Don't be afraid to turn up at each plowing a little of the virgin soil. Neither will the old cut and cover method answer the present demand.

The seed bed should be made mellow and deep, before the planting is done. Then the roots of the young plants will soon fill all the space given them, in quest of nourishment. Your deep cultivation is done, and all future treatment consists in keeping the top of the ground light and free from weeds. Remember that it costs as much to grow one big hog weed as a whole hill of corn and potatoes.

Not many days ago we passed a field which had been highly fertilized, probably with green stable manure, and the hog weeds had grown so thick and high that it was impossible to tell what crop the field had been planted to.

Three men with two pairs of horses and harrows were trying to subdue the weeds sufficiently to run the plow.

The men were riding on the harrows across the field, then lifting the harrows, and leaving a great winrow of weeds on the borders, most of the weed seeds must have been left on the field to be plowed in, not less then ten bushels to the acre. If this man does not raise a premium crop of hog weeds for next season, it will not be because he has not done all in his power to produce that result. It was a clear case of *too large a farm.*

Perfect composting of the fertilizers used, and frequent light surface cultivation, would have saved all this, and the disappointment which it entailed.

Many of our vegetables, in fact most of them, receive much of their nourishment from the atmosphere, not only through their foliage, but the *tender rootlets* which reach up to the surface for dew and solar heat.

All plants receive their food in a liquid form only, and can be kept in a healthy growing condition only by being supplied with sufficient water.

The damage done by a long continued drouth can alone be avoided by some system of irrigation, whether it be running streams, or the use of the wind mill or hand hose. Most of our progressive market gardeners have seen the necessity and supplied themselves accordingly, and instead of *one half-grown disappointment* they raise *two* and often *three* good paying crops. His early vegetables are all started under glass, so as to be put out as soon as the ground is warm enough. The high prices of the early crop give a good showing on the balance sheet.

These are some of the conclusions which lead us to believe fully in the advocacy of the old song, "A little farm well tilled, and a little barn well filled, etc."

We believe that the net profits of the average tiller of Essex Co. soil, is in inverse ratio to the number of acres gone over.

Certainly when we see one of our city grocers with not over two acres of tillage land bearing off the lion's share of

premiums from the Essex Agricultural Society year after year, not only in fruits, but in vegetables, corn, eggs, and fine colts, as well, we are forced to conclude that it is not more acres, but better and more thorough cultivation needed to make *Agriculture* and *Horticulture* a satisfactory and remunerative calling.

It is often said that any man could be a farmer. This saying we consider obsolete, in this nineteenth century.

A successful tiller of the soil, must be a man of good general information, wide-awake, thinking, energetic, and capable of making scientific investigations, and drawing logical deductions therefrom. Must know, what, when, now and where to plant and cultivate, in order to attain success.

The smaller his plot of land the more the need of brains and untiring watchfulness, from the time his plants show themselves above the ground, until they are gathered for the market; not only is the ground full of enemies but the air as well, and he must not only be a good *worker*, but a good *fighter*. He must often exchange the hoe and the cultivator for the spraying machine, to stop the depredations upon his fruit trees, must know what plants will thrive in partial shade and what ones will only grow and mature by the aid of the full rays of the noonday sun. What crop to put on the low land and what on the high.

These are some of the lessons we have tried to learn and apply in the cultivation of our little "*ten square rods*," and in conclusion will name some of the principal trees, shrubs, and plants which have grown thereon the past season, viz.:

12 Pear Trees, 6 Peach, 4 Plum, 2 Apple, 2 Quince, 1 Cherry, 10 Grape Vines, Blackberries, Raspberries, Rhubarb, Asparagus, 24 Hardy Roses, 12 Hardy Phlox, 10 Lilies, 4 Rhododendrons, Lilac, Saringa, Fersythia, Spirea, Clematis, Snowberry, Polygonum, Honeysuckle,

Begonia, Ferns, Pyrus Japonica, Holyhock, Digitalis, Canterbury Bell, Peony, Pansy, with beds for 200 spring flowering bulbs, and annuals during summer.

All of these are in a fairly thrifty growing condition, having produced an abundant family supply, with frequent donations of fruit and flowers, to gladden the sober aspects of the sick chamber and an occasional contribution for the market.

Most of the labor has been performed by our own hands, as a healthful exercise in the golden hours of the early morning.

With the spade, hoe, rake, trowel, pruning shears, lawn mower and hand stone roller at hand, we have had no occasion to seek the gymnasium for muscular development, or the turkish bath to create a sensible perspiration.

COMPARATIVE VALUE OF CROPS AS FOOD FOR CATTLE.

STATEMENT OF GEO. A. ROGERS, SUPT. COCHICHEWICK FARM, NO. ANDOVER, MASS.

To the Trustees of the Essex Agricultural Society.

GENTLEMEN:—We realize the truth of the statement, that a single experiment in agriculture proves nothing, and that the only way we can reach correct conclusions, is by comparing the results of a series of experiments, nevertheless, the first experiment although it proves nothing itself, is just as necessary as those that follow it. For several years, no results of feeding experiments have been submitted to the Society. It should not be so. We need all the knowledge obtainable to enable us to make milk profitably at present prices. I herewith submit the results of an experiment made in Jan., Feb., and March, 1893 and trust that others will,—now that the ice has been broken,—go and do likewise. The five

cows in the test were registered Ayrshires, their ages and time of dropping last calf before the experiment, follows.

COW'S NAME.	AGE AT COMMENCEMENT OF TEST.	DROPPED LAST CALF.
Roxanna 8th	8 yrs. 1 mo.	Dec. 20th, '92
Roxanna 9th	7⅞ years	Oct. 7th, '92
Maid Douglass	8 yrs. 5 mos.	Jan. 5th, '93
Acorn	14 yrs. 9 mos.	Dec. 11th, '92
Nelly Day	11 yrs. 5 mos.	Oct. 5th, '92

The test was commenced January 9th and each Ration was used 10 days. Three days were allowed for change of food to affect the cows, and in the following table the number of lbs. of milk given, shows the yield of each cow, during the last 7 days of each feeding period. The following table gives each of the 8 Rations used, also the number of lbs. of milk given by each cow in the last 7 days of each period, the cost of food consumed by each cow, each day, and the food cost of each quart of milk produced by each cow, on each ration. Besides the above, the average cost of a quart of milk, from the 5 cows, on each ration is given, also the average cost of a quart of milk during the whole experimental period.

In the accompanying table in computing the cost of rations, the various foods used were valued at the following prices per lb. English Hay, 1c., Peas and Oats, 4-5 of 1c., Shorts, 17-20 of 1c., Cob Meal, 40-56 of 1c., O. P. Linseed 1 3-20 c., Oat Meal, 1 13-32 c., Mowed Oats, 4-5 of 1c., Meadow Hay, 3-5 of 1c., and Mangels at 4 cts. per peck.

We will now compare results found in the table and see what can be learned. For several weeks previous to Jan. 9th, we had been feeding the first ration, and the milk had been costing us 2.72+cts. per quart. We raise a lot of mangels and usually commence to feed them in December, 8 quarts to each cow per day. By substitut-

1st Ration.

20 lbs. English Hay, 8 lbs. O. P. Linseed Meal, 4 lbs. Shorts and 4 lbs. Cob Meal per cow per day.

Cow's Name.	Milk in 7 days.	Feed per day.	Cost per qt. Milk
Roxanna 8th.	187½	35 16-35c.	2.84c.
Roxanna 9th.	199½	35 16-35c.	2.67c.
Maid Douglass.	211	35 16-35c.	2.53c.
Acorn.	180½	35 16-35c.	2.97c.
Nelly Day.	204½	35 16-35c.	2.61c.

Average cost of quart of Milk 1st Ration, 2.72½c

2nd Ration.

Same as first ration except that 1 peck of Golden Tankard Mangels to each cow was substituted in place of 4 lbs. Linseed Meal and 2 lbs. each of Cob Meal and Shorts.

Roxanna 8th.	179½	32c.	2.68c.
Roxanna 9th.	194½	32c.	2.47c.
Maid Douglass.	196	32c.	2.45c.
Acorn.	157	32c.	3.06c.
Nelly Day.	183	32c.	2.63c.

Average cost of quart of Milk 2nd Ration, 2.66c.

3rd Ration.

Same as 2nd ration except that the amount of hay was reduced to 16 lbs per cow per day.

Roxanna 8th.	168	28c.	2.51c.
Roxanna 9th.	189½	28c.	2.22c.
Maid Douglass.	196½	28c.	2.14c.
Acorn.	147½	28c.	2.85c.
Nelly Day.	182½	28c.	2.31c.

Average cost of quart of Milk 3rd Ration, 2.43c.

4th Ration.

Grain and Mangels the same as in 3rd ration. The first half of time 20 lbs. mowed oats were fed, and the last half 20 lbs. of peas and oats.

Roxanna 8th.	167½	28c.	2.51c.
Roxanna 9th.	181½	28c.	2.31c.
Maid Douglass.	183	28c.	2.31c.
Acorn.	145½	28c.	2.88c.
Nelly Day.	175½	28c.	2.40c.

Average cost of quart of Milk 4th Ration, 2.48c.

5th Ration.

20 lbs. English Hay, 1 peck of Mangels and for first half of time 4 lbs. Shorts and 3 lbs. of oats. The last half of time 3 lbs. of Cob Meal was substituted in place of Shorts.

Cow's Name.	Milk in 7 days.	Feed per day.	Cost per qt. Milk
Roxanna 8th.	169	31c.	2.76c.
Roxanna 9th.	183	31c.	2.55c.
Maid Douglass.	176½	31c.	2.63c.
Acorn.	126	31c.	3.70c.
Nelly Day.	169½	31c.	2.71c.

Average cost of quart of Milk 5th Ration, 2.87c.

6th Ration.

Coarse Meadow Hay 15 lbs. per cow cut and steamed and mixed with 8 lbs. O. P. Linseed Meal, 4 lbs. Shorts and 4 lbs. of Cob Meal per cow per day.

Roxanna 8th.	147	25c.	2.55c.
Roxanna 9th.	171	25c.	2.20c.
Maid Douglass.	152½	25c.	2.48c.
Acorn.	140	25c.	2.68c.
Nelly Day.	167	25c.	2.25c.

Average cost of quart of Milk 6th Ration, 2.43c.

7th Ration.

Same as first ration. Drinking water warmed to 60 degrees.

Roxanna 8th.	174½	35 16-35c.	3.05c.
Roxanna 9th.	188½	35 16-35c.	2.83c.
Maid Douglass.	160½	35 16-35c.	3.31c.
Acorn.	163½	35 16-35c.	3.25c.
Nelly Day.	195	35 16-35c.	2 72c.

Average cost of quart of Milk 7th Ration, 3.05c.

8th Ration.

Same as 7th ration with cold drinking water.

Roxanna 8th.	182	35 16-35c.	2.92c.
Roxanna 9th.	187	35 16-35c.	2.83c.
Maid Douglass.	167	35 16-35c.	3.18c.
Acorn.	156½	35 16-35c.	3.40c.
Nelly Day.	191	35 16-35c.	2.77c.

Average cost of quart of Milk 8th Ration, 3.02c

Average cost of quart of milk during whole experimental period,—2.70c.

ing the above amount of mangels in place of the morning feed of grain in the 2nd ration, the cost of each quart of milk was reduced 3-50 of 1 cent. But the quantity diminished 33.9 quarts at 3 1-2 c. per quart, the decrease in quantity amounted to $1.18+ while the reduction in cost per quart amounted to $2.74+. By substituting the peck of mangels worth 4 cts. in place of 7 5-7 cts. worth of grain, the actual shrinkage which is all the time going on was offset, and a gain in profit of $1.56 was made with the 5 cows on 7 days milk. Our mangels actually cost us but 2 cts. per peck and if I had figured them at that price they would have made a still better showing in the ration. But all other foods are figured at market rates, hence the mangels should be, and the profit of 8 cts. per bushel appears in my accounts where it belongs, viz., Cr. to the mangel crop. Enthusiastic dairymen would rob their crops of all profit, and place them in their rations at cost and thus swell the profits of milk production, but such a course is misleading. The actual cost of a quart of milk on ration No. 2, was 2.66+ c. Finding our supply of hay running short and believing that our cows were consuming more than they could assimilate, we reduced the ration of hay in the 3rd period to 16 lbs. per day. The average cost of a quart of milk on this ration was 2.43+ c., a saving of 23-100 of 1 cent from the cost of a quart in ration No. 2. The quantity diminished 12 quarts, and at 3 1-2 cents per quart amounted to 42 cents, while the saving, resulting from the reduction in cost per quart on what was given, amounted to 94.5 cents. Here is an instance where by saving hay, we increased the profit. We cut the hay ration down to 16 lbs. per day on the balance of our cows, and by so doing believe that we saved enough to pay the cost of this feeding experiment many times. We are satisfied that the average cow, if given a chance, will eat more than she can assimilate, and profitably convert into milk. At the same time we believe

that the majority of cows in Essex County, are underfed and are not forced up to the point from whence comes the greatest profit. There is a golden mean and that is what we want to find. In the fourth period, English hay was left out, and twenty lbs. of mowed oats for the first five days and 20 pounds of peas and oats for the last five days were substituted. The same amount of grain and mangels were fed, as in rations No. 2 and 3. The mowed oats alone gave 10 per cent. more milk than did the peas and oats. After two years experimenting, I must say that I find dried pea vines a poor stock food. This together with the fact, that the oats stood 10 days too long, waiting for the peas to get in condition to cut, accounts for the 10 per cent. reduction. The average cost of a quart of milk in period No. 4, was 2.48+c. Comparing period No. 4, with period No. 2, we find that by substituting the 20 lbs. of oats and peas in place of the 20 lbs. of hay, that the cost of a quart of milk was reduced 22-100 of 1 cent, while the quantity given diminished 14.4 qts. The loss on quantity at 3 1-2 c. qt. amounted to 50.4 cents, while the amount gained by the reduction of cost per qt. was 87.2 c. From the foregoing, it is evident that mowed oats at $16.00 per ton, can be profitably substituted in place of good hay, when the latter is $20.00 per ton. Cattle tire of an oat fodder diet easily however, and will not do as well on it for a month, as they will for a week. Mowed oats can be used to the best advantage by feeding once each day, and when so fed in connection with English hay, I consider them worth $18.00 per ton, when hay costs $20.00. In the fifth period, we put the 5 cows in the test, back on to 20 lbs. of English hay, continued to feed the peck of mangels, and in place of 4 lbs. of linseed, 2 lbs. cob meal and 2 lbs. of shorts, we fed during the first 5 days, 4 lbs. of oats and 3 lbs. of shorts, and in the last 5 days, 3 lbs. of oats and 3 lbs. cob meal. The oats and shorts gave the best results. The average cost of a quart of milk, during the fifth

period was, 2.87+c., an increase over ration No. 2, of 21-100 of 1 cent. The decrease in quantity was 13.4 qts. amounting at 3 1-2 cents per qt. to 46.9 cents. The increase in cost of milk produced amounted to 80.5 c. The change of grain increased the price per qt. and diminished the yield. In the sixth ration, the same amounts and kinds of grain were given as in ration No. 1. The English hay was left out and 15 lbs. of meadow hay, cut and steamed, was substituted in its place. The cost of a quart of milk on the sixth ration was 2.43+c., 29-100 of 1 cent less than on ration No. 1. The decrease in quantity from the first period was 95.8 qts. worth $3.34+, while the gain by the reduced price of each quart was $1.04+. A quart of milk was produced the cheapest on the meadow hay, but the decreased yield offsets this gain by $2.30. From this test it is evident that common meadow hay is not worth over $10.00 per ton or half as much as English. Fed with the same amount of grain as English hay, the total yield will decrease, but the cost per quart will be reduced in like proportion, so that the results will be the same. Our cows would not eat over 15 lbs. of the meadow hay, not being accustomed to it. Much has been said about the advantages of warming water for stock, and to test this point as well as to determine how much the natural shrinkage had been during the 80 days of the test, we gave the cows during the 7th and 8th periods, just the same rations as during the first period. In the seventh period, the water was warmed to 60° Fah. and in the eighth, it was used just as it came from the pipes. The average cost of a quart of milk in the seventh period, was 3.05 cents and in the eighth, 3.02 cents, undoubtedly the reduction of 3-100 of 1 cent on the cost per quart was occasioned by having a settled ration for 20 continuous days. In the seventh period, 882 lbs. of milk were given and in the eighth, 883 1-2 lbs. With these results, we have nothing for or against warm water.

Comparing the first and eighth periods, in which food and conditions were alike, we find an increase in the cost per quart of 3-10 of 1 cent and a decrease in quantity of 10 per cent. In the 80 days of the test, the daily yield of milk decreased 10 per cent. How much of this natural decrease took place in each feeding period, we cannot say, being an unknown factor I have left it out, nevertheless, its influence has been felt, and in considering the above figures a small allowance should be made in favor of the second ration, and this allowance should be increased for each of the following periods until in the eighth it amounts to 10 per cent. We did not have, nor could we get, any corn fodder fit to use, at the time we made the above tests. If we could have got it, we should have used it. To determine the exact relative value of the different foods as compared with English hay, it would be necessary to limit the ration during one period to nothing but hay and then with the results of that period, as a basis, compare other foods. This we did not care to do, as the cows in the test, being used to grain, would have fallen off in their milk to a point, from which it would be hard work to get them back. In the table and in the computations which follow, we have used but one and two decimal places to save time, and the results while not mathematically exact, are relatively correct. The cows came out of the test in good condition.

From the foregoing, it is safe to assert that when good English hay is worth $20.00 per ton, that mowed oats are worth $16.00, and meadow hay $10.00 also that mangels at 16 cents per bushel can be fed profitably, and that the average cow when fed fair rations of grain, will not use over 16 lbs. of hay per day to the best advantage.

FARM BOOK-KEEPING.—ITS NECESSITY.

BY GEO. A. ROGERS, OF NO. ANDOVER.

For several years we have been laboring to impress upon farmers the necessity of keeping an account of their b u

ness, and we are glad to see that the majority of farmers are awaking to this necessity. Unless personal and farm accounts are kept separately the farmer is apt to use up more money for personal and family expenses than his labor would amount to if he performed it for some one else, and then he complains that his business is unprofitable. Besides, unless such accounts are kept, there is a liability that you will have to pay the same account twice, or that memory will fail you, and that you may overpay an account that you owe, or may receive less than is due you on some account. But of more consequence, even than the foregoing are Crop and Stock accounts. I have known men who made a fair profit on their crops taken as a whole (although on certain crops they lost a proportion of what they made on others), to lose all the profit from their crops by keeping unprofitable stock. If no account had been kept, the result at the end of the year would have been just the same, i. e. the farmer would have come out just even. Do I hear those who claim that it is useless for farmers to keep account exclaim, "that is just what we have always said, accounts are no good anyhow." Let us see. If no account had been kept, the farmer, at the end of the year would have known one thing, viz., that he did not make anything, but for his life he could not have told you why. He would probably have said, "Farming don't pay." But with his crop and stock accounts to enlighten him he finds that he made on his acre of early vegetables (which for want of space I will not particularize) a clear profit of $100; on his 2 acres of potatoes a clear profit (and by profit I mean the net return after deducting all expense, including labor of himself at its market value) of $100 more, but that his crop of late cabbage which he planted in very wet ground, and lost over half the heads because the plants grew clubfooted, failed to return as much as it cost him by $20. His corn crop just paid, that is after allowing full value for the stover for fod-

der each bushel of shelled corn cost him the same as he could buy No. 1 yellow corn for at the grain store (although like all of us N. E. yankees he thought corn of his own raising a little better than western corn). With the above crop accounts before him, he finds that he has in that branch of his business, besides paying all expenses, and receiving pay at a fair rate for his own time, made a profit of $180. His cabbage crop was unprofitable. He resolves next year to put his energy and time into the production of the most profitable crops and to buy his corn. Here let me say that I wish no one from the foregoing to conclude that he cannot grow corn. Localities and circumstances alter cases, and on some other farm corn might be the most profitable crop that could be raised. Here is where the utility of crop accounts comes in, every farmer must experiment for himself and with the aid of his accounts, determine what crops are the most profitable for him to raise. Now in this certain year, this farmer made a net profit on his crops of $180, but he kept 12 scrub cows. His stock accounts showed him at the end of the year, that his cows had given him an average of 1500 qts. each, this at an average of 3 cents per quart, amounted to $45 per cow. The cost of feed per cow per year had been $60. The net loss of $15 on each cow, on the 12, amounted to $180, or the amount he made on his crops. Of course there was the manure left, but after putting back as much fertility as the hay, grain, etc., removed from the soil, and reckoning out fair wages for caring for the stock, and interest and taxes on and shrinkage of capital invested, nothing was left. The stock account figures, assured that man that there was more profit in keeping one good cow than 12 poor ones, and showed him that it was policy for him to dispose of his present stock, and get half as many cows that would give the same amount of milk as the 12. Accordingly he sold his twelve cows at auction, and adding $100 to the amount received, he invested it in 6 good

cows. At the slight increase in cost of grain fed, of $10 per head, these cows averaged 3000 qts. each, worth $90 and each returned a profit of $20, making up the first year, the $100 extra capital invested, and $20 more. Now if it had not been for this man's book-keeping he would have kept plodding along just even. With his eyes open and his business before him in exact and comprehensive accounts he uses the knowledge he has obtained and is soon on the road to success. To the farmer as well as to other men knowledge is power.

HOW TO KEEP FARM ACCOUNTS.

The great bugbear in Farm Book Keeping has been the amount of time necessary to do it. But books can be so prepared that it will not require over 20 minutes per day to keep a complete and comprehensive record of one's business. All cash accounts should be balanced once each month. Crop and stock accounts need not be balanced but once each year and this can be done in the cold stormy days of winter, when your time during a part of each day is of but little value. To get the best knowledge of your business it will be necessary for you to keep the following accounts. First, a strict cash account. In filling out this account, it will save a vast amount of labor in making out your farm accounts at the end of the year, if you put all personal and family expenses in one column, and all farm expenses in another, and all receipts from the farm in one column and all receipts from outside sources in another. In all cases write plainly the name of the articles bought and sold. Second, you should keep a credit account that you may remember whom you owe and who owes you. Third, you should take an inventory at the commencement of the year and another at the close, the same to include all resources and liabilities on each date. Then you will be able to tell your loss or gain. Fourth, you should keep a separate

account with each kind of stock of the amount and value of food consumed. You should keep a milk record of your cows, an egg record of your fowls, a pork record of your hogs, and a labor record of your horses. Then from the total amount credited to each department, take the cost of food, care, interest on capital, taxes, etc., add in the value of manure produced, and the result will be the profit. The cows should be credited with the milk used in the family and the hens with all eggs whether used or sold, and when a pig is put in the pork barrel, the pig department should be credited with the amount he was worth and the family charged. An individual milk record with the cows enables one to dispose of the least profitable. I have often noted that a cow that gives a big mess when fresh and gets the name of the best cow, often comes to the end of the year several hundred pounds behind some other cow that was considered but ordinary. Fifth, a separate account with each crop should be kept. When you have decided to plant a crop, measure the land it is to occupy. Keep account of the number of cords and value of fertilizer and manure used. Keep account of the number of hours labor spent in planting, cultivating, and harvesting the crop. Add in cost of seed, interest on land, etc. From this amount subtract the value of the manure applied, not used by the crop, as near as you can estimate it and you have the total cost of the crop. Unless you know what your crops cost, you cannot intelligently set a selling price. Keep account of the number of bushels or lbs. produced. Divide the total cost by this number and you have the cost of a bushel or pound. The only uncertain quantity in crop accounts is the value of manure left in the soil. Experiments should be made to determine this point. A part of crop accounts can be kept in the form of a diary. Each man should have a space allotted to him each day. It thus becomes a time account. If any man fails to work, put a cipher

in his space. If he weeds beets 3 hours, and plants cabbages 7 hours, put the following in his space. "Weeded beets 3 hours. Planted cabbages 7 hours. This shows that he worked his full day. A crop account kept in this way enables us to tell what we were doing on a certain day the year before, also whether our crops are earlier or later than the year previous. Kept in this way, the account is a wonderful aid to memory, for generally when one fact is recalled, several more associated with it get off the dusty shelves of memory and come trooping along with it.

In closing, I would add one admonition. Don't attempt to keep accounts and then give it up. It will come rather hard at first, but after you have formed the habit, and have kept them a year, you will find your interest in your business increasing, also your bank account. It will not do to let your accounts go for 2 or 3 days, and then fix them up. They require a few minutes time each and every day. Those who have sons and daughters over 12 years of age, can choose one of them for a book-keeper. The knowledge of business methods gained will be helpful to them when they start out for themselves. Only those farmers who thoroughly understand their business will succeed in the future. Time spent by a farmer in studying his business is never wasted. The farmer of the future must let his head do more and his heels do less. During the last 25 years, thousands of shiftless farmers have just about kept even. In any other occupation, they would have gone to the wall. I have always and do now maintain that agriculture offers better inducements to young men than any other occupation, but competition is growing keener each year, and in the future the "fittest only will survive."

REPORT OF HERD OF MILCH COWS.

To the Committee on Herd of Milch Cows.

GENTLEMEN:—The herd of cows entered by me came from Vermont, Oct. 18, 1892, with the exception of Jennie Dean, which I had owned before.

They are all grade Jerseys. Jennie Dean is eleven years old, calved July, 1892, and again June, 1893; Green Mountain Maid is seven years old, calved in November, 1892; Black Birch is eight years old, calved March 8, 1893; Yellow Birch is seven years old, calved in October, 1892; Reed's Favorite is five years old, calved in December, 1892.

They were fed nothing but grass until November 5, 1892, after which date and until December 13, 1892, they were fed hay and one bushel of ensilage a day each. From December 13, 1892, until May 12, 1893, when they were turned on ordinary pasture, they were fed four quarts a day each, of a mixture consisting of one part corn meal and two parts bran.

Began the same grain ration, Sept. 16, 1893. It will be seen by dates of calving that some were dry, while others were giving full flow of milk, but at no time from December 13, 1892, until August 18, 1893, have they given less than forty quarts a day.

The average is much in excess of that amount, as Green Mountain Maid gave twenty quarts a day for more than three months, and Reed's Favorite eighteen, Jennie Dean, Black Birch, and Yellow Birch, gave never less than eight quarts a day, until within two months of calving. The milk was very rich and was chiefly made into butter.

Yours respectfully,

THOMAS SAUNDERS.

REPORT OF NEW MEMBERS.

The total number of new members to Nov. 1, 1893, was twenty-eight, including those who, by receiving awards of seven dollars or upwards, became members under the rule which deducts three dollars from each award

to non-members for membership, which membership is for life, without assessments, and entitles the member to a voice and vote in the society's business, and a copy of its annual publication of its Transactions. The following places furnished the new members:

Bradford,	4	Ipswich,	1
Boxford,	1	Merrimac,	1
Danvers,	2	Methuen,	1
Georgetown,	2	Newbury,	3
Haverhill,	8	Stoneham,	1
		West Newbury,	4

IN MEMORIAM.

In obtaining the names of members of the society deceased, the Trustee in each town and city was requested to notify the secretary of the death and age of each member deceased, with brief notices of each in printing or writing, from which the following has been compiled:—

Deacon John K. Cole, of Boxford, died Sept. 10, 1891, at the age of 76 years, 8 months and 24 days. Mr. Cole was born in Boxford and resided there most of his life. About the year 1840 he was Captain of a militia company and was well known in local military circles at that time. He was deacon of the First Congregational Church for thirty-eight years, and Superintendent of the Sunday School for thirty years, selectman and assessor for several years, and member of the Massachusetts House of Representatives in 1861.

Deacon Cole was not what the world would call a great, eminent or brilliant man, but he was one of the best exemplifications of a plain practical man of good sense, sound judgment, and responsibility to himself, to his

family, to the community of which he was a part, and to the Infinite Power that created him. His business was that of a farmer, but he was well known also as a builder of roads, several of which he constructed in both Boxford and Topsfield, and which remain to show the substantial manner in which he did his work.

William H. Wood, of Boxford, died suddenly at his home, Nov. 6, 1891, at the age of 70 years, 7 months and 21 days. Mr. Wood was a life long resident and farmer. He had held several responsible town offices, a member of the Second Congregational Church, and was interested in the Sunday School for many years. Poor health, caused by an accident several years ago, rendered him unable to take any active part in farm work.

James P. Cleveland, of Boxford, died Dec. 24, 1892, aged 54 years, 7 months. Mr. Cleveland was born in Byfield, but has been a resident of Boxford for many years. He owned a large and valuable farm. He has always taken an active interest in public affairs, was a kind and obliging neighbor, and a true and genial friend.

Wm. Henry Kinsman, of Ipswich, died Nov. 30, 1891, aged 73 years, 10 months. Mr. Kinsman had not enjoyed good health for some time, but was around attending to his business, and went to Hamilton on the day of his death and dropped dead while standing at the door talking with a friend on his way home. He joined this society in 1869, was always an interested member and respected by all who knew him.

William Donnison Hodges, M. D., died at Nahant, Mass., March 8, 1893. Born in Boston, March 9, 1854, and graduating at Harvard College in 1877, he took his Medical Degree at the same University in 1880. After a period of service at the Massachusetts General Hospital

he spent several years in Europe, and on his return in 1884, established himself as a physician in Boston. He practised in summer at Nahant and eventually became a citizen of that town, identifying himself with its interests, serving as Town Physician and on the School Board, representing the Town in the State Legislature of 1891, and in the succeeding year becoming a member of the State Republican Committee. He was a member of the St. Botolph Club of Boston, of the Oxford Club of Lynn, Secretary and Treasurer of the Nahant Club, and an Officer in the St. Andrew Lodge of Free Masons in Boston. He was a member of the Massachusetts Medical Society, of the Essex Agricultural Society, of the American Climatological Society, of the Boston Society of Natural History, and of several other Scientific Associations. He was greatly interested in matters pertaining to Sanitation and Meteorology.

For a year or two Doctor Hodges had been in failing health, and at the time of his death had given up active medical work. He was a man who endeared himself to those with whom he came in contact. His kindness and cheerfulness won for him friends on all sides, and his loss leaves a blank in many hearts.

Richard T. Jaques died in Newbury, Nov. 7, 1893, aged 87 years, 9 months. He was born on the farm on which he died, in the house beneath the "Old Elm of Newbury." He was a man respected by all, holding offices of trust for many years. He was a man of good ability, strong convictions, very positive in his belief, and one who will be missed by many. He was the most constant attendant, probably, of any man in the County at the "Cattle Show," having missed but seven or eight since the Society was formed.

Richard S. Bray, of Newbury, died Feb. 8, 1893, aged 69 years, 9 months, on the farm on which he was born

and where he always lived, with the exception of a few years in his younger days. Mr. Bray was well known to the members of this Society, always attending "Cattle Show," and till he gave up keeping oxen, he generally plowed, and worked at the hill almost always taking one or more premiums, so that it was a common saying in the neighborhood that "if Bray and Jaques were going to plow it was no use for any one else to try." Mr. Bray was a good neighbor, always ready to do any one a good turn.

Deacon Joseph Little died in Newbury, May 14, 1893, on the farm where he was born, July 19, 1799, and where he had lived all his life, leaving a wife to whom he was married Oct. 18, 1821, and three generations of descendants to inherit the farm, which has been in the family since the town was settled in 1635. He was a man that never sought office, although he was sent to House of Representatives in 1843, and was a Deacon in the First Church for more than 40 years.

Hon. Warren Currier, of Newburyport, died Sept. 11, 1893, aged 63 years. He was born in Newburyport, and one of the firm of Sumner, Swasey & Currier, merchants. Mr. Currier was prominent in public affairs: in 1864-5, as Alderman: in 1873-4, as Mayor: he also served the District as State Senator. As a public man he was straightforward and unwavering in whatever he believed to be right. Mr. Currier was high in the council of the Masonic Fraternity.

Wm. C. Plummer, of Newburyport, died Dec. 9, 1892, aged 57 years, 3 months. He was a native of Newburyport and was always numbered among its most successful business men. He was interested in farming at one time, but for years was one of the leading grocers, and produce dealer, being universally known by the farmers in this part of the county.

Capt. John Perkins, of Lynnfield, died Aug. 25, 1893. aged 87 years. He was born in Lynnfield and always lived there. He was honored and respected by all, for his honesty and uprightness in all his dealings. He had represented the town in the Legislature and held the office of Town Clerk and Selectman for many years. He joined this society in 1846, and was an active member for many years.

Mr. Robert G. Bennett, one of Beverly's honored citizens, died a year ago. He was the cashier of the Beverly Savings Bank, also the Town Treasurer.

Mr. Augustus Stevens, one of our most respected citizens, died Aug. 1, 1893. He was cashier of the Beverly National Bank.

Mr. Franklin Haven, of Beverly, died this last summer, he was not an active member of the Society. He resided at Beverly Farms in the summer season, and was prominent in business affairs in Boston.

Mr. M. P. Little, Alfred Ordway, and Walter S. Peabody, all of Bradford, have died during the past year.

Mr. Gardner Barton, of Salem, died July 15, 1892, at the age of 77 years. He was known as one of the leading apothecaries of Salem, having been engaged in that business almost a half a century. He was held in high esteem by all, a man of integrity,—showing throughout life a marked cheerfulness of disposition.

C. W. Titcomb died in Somerville, Oct. 7, 1893, aged 72 years. Mr. Titcomb was a native of Newbury, (Byfield Parish,) and, although the greater part of his life was spent in Boston, where he established and maintained an enviable reputation as a business man, he ever felt

an interest in the place of his birth, and in farming, the work of his early life.

His interest in Agriculture induced him some years since, to purchase, and occupy the farm in Bradford, formerly known as the "Howe Farm," thinking that perhaps he could be an Essex County farmer, and at the same time, a business man in Boston. After a few years experience, he concluded that both could not be prosecuted profitably, consequently gave up his farming, and confined himself to his business in Boston.

The wish he has often expressed in late years, "that he might die in the harness," was granted him, for while at telephone transacting business with a customer, he fell backward to the floor; after remaining three days, most of the time in an unconscious state, he passed away.

Horace P. Noyes died in Dorchester, Jan. 8, 1893, aged 73 years. Mr. Noyes was born in Newbury, where he owned a farm which he cultivated till within a few years when he laid it down to grass, and spent his winters in Dorchester, and his summers on his farm. He was a quiet, retiring man, a good neighbor and citizen.

Daniel Plumer died in Newbury, Dec. 2, 1893, aged 70 years. He died on the farm where he was born, and had always lived. He had been a member of the Society for a good many years, and was well known in this part of the County, being a market gardener for the last few years.

Benjamin E. Emery, who died Oct. 31, 1891, at the advanced age of 93 years and six months, was perhaps as intimately identified with the Agricultural interests of this section and for as long a time as any man in the county. I have known him well for 20 years and can bear testimony to his admirable judgment and skill in all matters pertaining to the farm. No man knew an ox or

a cow better than he did, no man knew better how to feed and care for them. If he did not make a brilliant financial success in farming it was because he was a better farmer then he was trader. His heart was in the right place, he was always ready to assist a neighbor and everybody was his neighbor.

We shall miss his honest kindly face from these gatherings, which he so much enjoyed, and for the success of which he worked so hard. He was born in Atkinson, N. H.

Samuel Fellows died May 25, 1892, aged 81 years, 8 months, 22 days. Though not an Agriculturalist, Mr. Fellows always manifested an interest in our association, and was one of our most worthy citizens, contributing often to our exhibitions, by a display of Agricultural implements.

A. Washington Chase died Feb. 14, 1892, aged 58 years, 4 months and 9 days. President of the Haverhill National Bank. Mr. Chase was not a farmer, but he is one whose loss is deeply felt in this community. He was a constant attendant at our Fairs and was one of the first Haverhill men to join the Society. He was born in West Newbury.

James Davis died Dec. 29, 1884, aged 86 years, 10 months, one of the veterans of the Society who has long been missed from among us, but whose death has not before been officially recorded.

Thomas H. West died April 4, 1892, aged 80 years, 10 months, 24 days; a life long farmer devoted to the interests of the Society. He was born in Boston.

Allison Wheeler died Aug. 22, 1890, aged 71 years, 10 months, 19 days. Born in Salem, N. H.

Justin Cook died Feb. 5, 1890, aged 65 years, 7 months, 14 days. Born in Charlestown.

Daniel Brickett died Feb. 19, 1892, aged 67 years. Always a resident of Haverhill, his birthplace, and an active farmer.

Albert Heath died May 18, 1892, aged 78 years, 9 months. Both as carpenter and farmer, he occupied a prominent position. Born in Newburyport.

Daniel D. Flanders died Dec. 12, 1890, aged 65 years, 11 months, 20 days. Born in Sandown, N. H.

Daniel Hooke died.

Mrs. Mary P. Little, of Bradford, died during the past year.

Alfred Ordway, of Bradford. Born in West Newbury, July 30, 1812. Died in Bradford, March 5, 1893. Mr. Ordway was the originator of the Ordway Apple, for which he received a premium from this Society. He was a good judge of fruit, he was also an extra good man to graft and care for fruit trees, in all stages, and was of great value to his townsmen.

Dr. GILBERT L. STREETER, TREAS., IN ACCOUNT WITH THE ESSEX AG'L SOCIETY. Cr.

1892-93.		1892-93.	
Nov. 8. To Balance of previous account,	$65 84	By Amt. of premiums and gratuities awarded by the Trustees,	$2,090 75
Bank Dividends for October,	360 20	Rent paid to the Salem Athenæum,	25 00
State Bounty,	600 00	Expenses of Farmer's Institutes,	87 00
Bank Dividends for April,	351 25	Expenses at Treadwell Farm (Insurance),	21 00
State Tax on Bank Stock refunded,	240 56	" on account of Annual Exhibition,	63 55
Interest on Mortgage Note,	60 00	Printing Transactions, etc.,	572 36
Cash received for New Members,	69 00	Interest on temporary loan,	42 28
Net Proceeds of Annual Exhibition rec'd from com.,	441 71	List of Diplomas and Index of members,	105 00
Income from the Treadwell Farm,	223 85	Secretary's account,	251 10
Unclaimed premiums,	76 25	Treasurer's account,	53 00
Balance due the Treasurer,	832 38		
	$3,321 04		$3,321 04

Funds belonging to the Society, Nov. 1, 1893.

10 shares in National Hide and Leather Bank, Boston,	$1,101 8
3 shares in Revere National Bank, Boston,	377 62
18 shares in First National Bank, Salem,	1,914 66
18 shares in Salem National Bank, Salem,	2,000 00
42 shares in Asiatic National Bank, Salem,	1,281 25
12 shares in Mercantile National Bank, Salem,	1,226 50
23 shares in Merchants National Bank, Salem,	1,189 50
5 shares in First National Bank, Danvers,	375 00
8 shares in National Exchange Bank, Salem,	800 00
11 shares in Warren National Bank, Peabody,	1,595 40
15 shares in South Danvers National Bank, Peabody,	1,471 25
Mortgage Loan,	1,000 00
	$14,333 05
Amount due the Treasurer,	832 38
	$13,500 67

Amount brought forward,	$13,500 67
Amount reported last year,	14,398 89
Loss,	$898 22

G. L. Streeter, Treasurer.

Salem, Jan. 5, 1894.

The above account has been examined this day, and is found correctly added and properly vouched, and the securities as stated.

Jos. H. Phippen, Auditor.

CONSTITUTION

OF THE

ESSEX AGRICULTURAL SOCIETY.

ARTICLE 1. There shall be a President, four Vice Presidents, a Secretary, and a Treasurer, who shall be Trustees, *ex-officio*. The President, Vice Presidents and Secretary shall be elected at the annual meeting by ballot, and the Treasurer by the Trustees, annually, at their meeting in November. In addition to these, one Trustee shall be elected annually for each town in the County, and the Trustee for each town shall be elected by members of the Society in said town, at a meeting called for that purpose,* in accordance with notice issued by the Secretary, and shall continue in office until another is elected in his stead; and such election shall be final, and shall constitute the Trustee so elected a member of the Board of Trustees of the Society; and the result of the election in each town shall be communicated as early as possible to the Secretary.

ART. 2. There shall be an Annual Meeting of the Society, at such times as the Trustees shall determine, at which all officers shall be elected. Twenty members at least shall be necessary to constitute a quorum for the transaction of business.

ART. 3. If at any meeting of the Society, or the trustees, the President and Vice Presidents shall be absent, the members present may appoint one from among them to preside at such meeting.

ART. 4. The President, or in case of his absence, either of the Vice Presidents, with the advice of the Trustees,

*These meetings are held the last Tuesday of October, and the Trustees elected commence their duties at the November meeting of Trustees.

may call a special meeting of the Society; or whenever a written application, with the reason assigned therefor, shall be made by any twelve members of the Society, to the Presidents and Trustees, they shall call such meeting.

ART. 5. The meetings of the Trustees shall be held at such time and place as they shall from time to time agree upon; seven of whom, with the presiding officer, shall make a quorum.

ART. 6. The Trustees shall regulate all the concerns of the Society, during the intervals of its meetings; propose such objects of improvement to the attention of the public, publish such communications, and offer premiums in such form and value as they think proper (provided the premiums offered do not exceed the funds of the Society); and shall lay before the Society, at each of its meetings, a statement of their proceedings and of the communications made to them.

ART. 7. The Secretary shall take minutes of all the votes and proceedings of the Society and of the Trustees, and enter them in separate books; and shall record all such communications as the Trustees shall direct. He shall write and answer all letters relating to the business of the Society.

ART. 8. The Treasurer shall receive all monies due or payable to the Society, and all donations that may be made to it, for which he shall give duplicate receipts, one of which shall be lodged with the Secretary, who shall make a fair record thereof. The Treasurer shall from time to time pay out such monies as he shall have orders for from the Trustees; and shall annually, and whenever thereto required, render a fair account of all his receipts and payments to the Society or a committee thereof. He shall give bonds for the faithful discharge of his duty, in such sum as the trustees shall direct, and with such sureties.

ART. 9. A committee shall be appointed annually by the Trustees, to audit the Treasurer's accounts, who shall

report to the Society; and the same being accepted, shall be entered by the Secretary in his books.

ART. 10. In case of death, resignation, incapacity, or removal out of the County, of the Secretary or of the Treasurer, the Trustees shall take charge of the official books, papers, and other effects, belonging to the office that may be vacated, and give receipts for the same; which books, papers, etc., they may deliver to some person whom they may appoint to fill the office until the next meeting of the Society, at which time there shall be a new choice.

ART. 11. *Any citizen of the County may become a member of the Society, by paying the sum of THREE DOLLARS to increase the permanent fund of the institution.

ART. 12. A committee shall be raised from time to time, to solicit and receive subscriptions for raising a fund for encouraging the noblest of pursuits, the Agriculture of our county: the same to be sacredly appropriated to that purpose.

ART. 13. All ordained ministers of the Gospel who reside within the County, shall be admitted honorary members of the Society.

ART. 14. In addition to the usual number of Trustees annually elected, the past Presidents of the Society shall be honorary members of the Board of Trustees.

ART. 15. The foregoing constitution may be amended by a proposition of the amendment in writing by a member at a regular meeting; the same to lie over for the action at the next annual meeting of the Society.

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*Members will receive from the Secretary a "certificate of membership." No fines or assessments are ever imposed. Members are entitled to vote in all its transactions, with free use of the Library and a copy of the printed "Transactions" each year.

A premium of six dollars is now offered to the resident of the County obtaining the largest number of new members during the year ending Nov. 1.

OFFICERS OF THE SOCIETY.

FOR 1893-94.

PRESIDENT.

FRANCIS H. APPLETON, of Peabody.

VICE-PRESIDENTS.

JAMES J. H. GREGORY, of Marblehead.
JAMES P. KING, of Peabody.
OLIVER S. BUTLER, of Georgetown.
HORATIO G. HERRICK, of Lawrence.

SECRETARY.

JOHN M. DANFORTH, of Lynnfield.

TREASURER.

GILBERT L. STREETER, of Salem.

HONORARY TRUSTEES.

JOSEPH HOWE, of Methuen.
BENJAMIN P. WARE, of Marblehead.

TRUSTEES.

Samuel Cammett, Amesbury. Andrew Nichols, Danvers.
Charles C. Blunt, Andover. Albert E. Lufkin, Essex.

John W. Lovett, Beverly.
Warren M. Cole, Boxford.
William Thornton, Bradford.
Isaac F. Knowlton, Hamilton.
E. C. Little, Haverhill.
James W. Bond, Ipswich.
Warren C. Allyn, Lawrence.
Asa T. Newhall, Lynn.
Harry W. Munroe, Lynnfield.
Julius F. Rabardy, Manchester.
Amos P. Alley, Marblehead.
George B. Bradley, Methuen.
George W. Sargent, Merrimac.
Hiram A. Stiles, Middleton.
Herbert F. Otis, Nahant.
Sherman Nelson, Georgetown.
Alonzo F. Harvey, Gloucester.
Samuel B. George, Groveland.
Otis L. Kent, Newburyport.
N. Warren Moody, Newbury.
John Barker, North Andover.
E. Pope Barrett, Peabody.
Story D. Pool, Rockport.
Thomas P. Hale, Rowley.
Henry A. Hale, Salem.
P. Albert True, Salisbury.
Samuel Hawkes, Saugus.
David Warren, Swampscott.
Frank H. Towne, Topsfield.
David Pingree, Wenham.
L. H. Bailey, West Newbury.

NEW MEMBERS.

Alfred O. Ordway, Bradford.
William McKee, Bradford.
John C. Day, Bradford.
Miss S. F. Franklin, Bradford.
James H. Webster, Boxford.
J. Frank Porter, Danvers.
Benj. Scribner, Danvers.
George B. James, Georgetown.
Chas. M. Witham, Georgetown.
A. H. Adams, Haverhill.
H. H. Hoyt, Haverhill.
John E. Hobson, Haverhill.
Byron G. Kimball, Haverhill.
Leslie K. Morse, Haverhill.
H. K. Weston, Haverhill.
James C. Merrill, Haverhill.
William W. Osgood, Haverhill.
J. W. Carlyle, Ipswich.
George W. Hoyt, Merrimac.
Homer Dow, Methuen.
Charles F. Knight, Newbury.
Richard T. Noyes, Newbury.
Edward A. Noyes, Newbury.
Walter Steele, Stoneham.
George G. Carr, West Newbury.
J. J. Conner West Newbury.
Horace Moody, West Newbury.
Robert L. Smith, West Newbury.

List of Premiums Awarded in 1893.

FAT CATTLE.

J. P. Little, Amesbury, best fat ox, first premium, $7 00
J. P. Little, Amesbury, pair fat oxen, second premium, 5 00

BULLS.

Charles Perley, Boxford, Ayrshire, first premium, $7 00
Francis H. Foster, Andover, Guernsey, first premium, 7 00
E. C. Little, Haverhill, Holstein, first premium, 7 00
Thomas Sanders, Haverhill, short horn, first premium, 7 00
M. H. Connor, West Newbury, Holstein, first premium, 5 00
Horace Moody, West Newbury, Jersey, first premium, 5 00
E. C. Little, Haverhill, Ayrshire, first premium, 5 00
A. E. Towne, Georgetown, Guernsey, second premium, 5 00
Thomas Sanders, Haverhill, short horn, second premium, 5 00
E. C. Little, Haverhill, Holstein, second premium, 3 00
E. C. Little, Haverhill, Jersey, second premium, 3 00
Richard Newell, West Newbury, Ayrshire, second premium, 3 00

MILCH COWS.

E. C. Little, Haverhill, Holstein cow, first premium, $8 00
E. C. Little, Haverhill, Ayrshire cow, first premium, 8 00
A. H. Adams, Haverhill, Grade cow, first premium, 8 00

HERDS OF MILCH COWS.

Thomas Sanders, Haverhill, 5 grade Jerseys, first premium $15 00

HEIFERS, PURE BRED.

Francis H. Foster, Andover, Guernsey, first premium, $5 00
E. C. Little, Haverhill, Holstein, first premium, 5 00
E. C. Little, Haverhill, Holstein, first premium, 5 00
John C. Day, Bradford, Ayrshire, first premium, 5 00
M. H. Connor, West Newbury, Ayrshire, first premium, 7 00
M. H. Connor, West Newbury, Ayrshire, second premium, 5 00

HEIFERS, NATIVE OR GRADE.

A. H. Adams, Haverhill, Grade, first premium, $7 00
Charles P. Balch, Groveland, Grade, second premium, 5 00
A. E. Towne, Georgetown, Grade, first premium, 5 00
Richard Newell, West Newbury, Grade, second prem., 3 00

WORKING OXEN AND STEERS.

Charles M. Witham, Georgetown, working oxen, first premium, $10 00
C. K. Ordway & Son, West Newbury, working oxen, second premium, 8 00
C. K. Ordway & Son, West Newbury, working steers, first premium, 8 00

STEERS.

J. P. Little, Amesbury, 3 year old steers, first prem., $7 00
Horace Moody, West Newbury, 3 year old steer, second premium, 5 00
Wm. H. Poor, West Newbury, 2 year old steer, first prem., 6 00
J. P. Little, Amesbury, 2 year old steer, second prem., 4 00
Horace Moody, West Newbury, 1 year old steer, first premium, 5 00
J. P. Little, Amesbury, steer calves, second premium, 3 00

TEAM USED ON FARM.

C. K. Ordway & Son, West Newbury, 2 pair oxen, first premium, 5 00
J. P. Little, Amesbury, 3 pair oxen, second premium, 3 00
E. C. Little, Haverhill, 2 pair horses, first premium, 5 00

STALLIONS, FARM AND DRAFT.

William Oswald, Lawrence, Clysdale, first premium, $10 00
J. W. Carlyle, Ipswich, Clysdale, first premium, 7 00
Henry Garso, Lynn, Clysdale, second premium, 6 00

STALLIONS FOR DRIVING PURPOSES.

Arthur J. Gunner, Lawrence, "Ned" C., first premium, 10 00
Leslie K. Morse, Haverhill, "Pentucket," second prem., 6 00
H. H. Demsey, Wenham, "Wilkes," first premium, 7 00
J. W. Murphy, Lawrence, second premium, 5 00

BROOD MARES—DRIVING PURPOSES.

H. H. Demsey, Wenham, Bay Mare, first premium.	10 00
Leslie K. Morse, Haverhill, second premium,	6 00
J. H. Tower, Haverhill, Black Mare, third premium,	4 00

FAMILY HORSES.

John L. Hobson, Haverhill, first premium,	8 00
Edwin Bates, Lynn, second premium,	6 00
Byron G. Kimball, Haverhill, third premium,	4 00

GENTS' DRIVING HORSES.

Byron G. Kimball, Haverhill, first premium,	8 00
William Merriman, Haverhill, second premium,	6 00

SINGLE FARM HORSES.

John H. Perkins, Lynnfield, first premium,	8 00
W. L. Hill, Peabody, second premium,	6 00
J. D. W. French, North Andover, first premium,	8 00
E. C. Little, Haverhill, second premium,	6 00

PAIRS FARM HORSES WEIGHING OVER 2500 LBS.

William E. Coffin, Newburyport, first premium.	8 00
A. E. Towne, Georgetown, second premium,	6 00

PAIRS FARM HORSES WEIGHING LESS THAN 2500 LBS.

W. E. Merrill, West Newbury, first premium,	8 00
E. C. Little, Haverhill, second premium,	6 00

COLTS FOR FARM PURPOSES.

John H. Perkins, Lynnfield, first premium,	7 00
Woodbury Smith, Rowley, second premium,	5 00
Richard Jacques, Newbury, third premium,	3 00
E. C. Little, Haverhill, first premium,	7 00

COLTS FOR DRIVING PURPOSES.

H. H. Hoyt, Haverhill, first premium,	7 00
John C. Day, Bradford, second premium,	5 00
E. H. George, Groveland, first premium,	5 00
A. H. Adams, Haverhill, second premium,	3 00

Byron G. Kimball, Haverhill, first premium, 7 00
John H. Perkins, Lynnfield, first premium, 5 00
Arthur H. Messerve, No. Andover, second premium, 3 00

SWINE—LARGE BREEDS.

W. L. Hill, Peabody, Chester boar, first premium, $6 00
W. L. Hill, Peabody, Yorkshire sow and pigs, first prem., 6 00
W. L. Hill, Peabody, Berkshire sow, first premium, 6 00
W. L. Hill, Peabody, weaned pigs, first premium, 6 00
W. L. Hill, Peabody, weaned pigs, second premium, 4 00
Nathan Longfellow, Groveland, Chester sow and pigs, first premium, 6 00
E. G. Nason, West Newbury, weaned pigs, second prem., 6 00
A. W. Butrick, Haverhill, Berkshire boar, first prem., 6 00
Richard Newell, West Newbury, Chester boar, second premium. 4 00
E. C. Little, Haverhill, sow and pigs, second premium, 4 00

SWINE. SMALL BREEDS.

W. L. Hill, Peabody, Yorkshire sow and pigs, first prem., 6 00
J. F. Calhoun, Lawrence, Yorkshire boar, first prem., 6 00
W. L. Hill Peabody, Duroc Jerseys, second premium, 4 00
W. L. Hill, Peabody, Poland China, second premium, 4 00
J. D. W. French, No. Andover, Yorkshire sow and pigs, second premium, 4 00

SHEEP.

J. D. W. French, No. Andover, Oxfordown buck, first premium, 8 00
J. D. W. French, No. Andover, Oxfordown lambs, first premium, 5 00
Richard Newell, West Newbury, Southdown buck, first premium, 8 00
Richard Newell, West Newbury, Grade sheep, second premium, 6 00

PLOUGHING WITH DOUBLE TEAMS.

J. P. Little, Amesbury, first premium, 10 00
C. K. Ordway, West Newbury, second premium, 8 00
E. C. Little, Haverhill, third premium, 6 00

PLOUGHING WITH HORSES.

Fred H. Poor, West Newbury, first premium, $8 00
W. E. Merrill, West Newbury, second premium, 6 00
A. E. Towne, Georgetown, third premium, 4 00

PLOUGHING WITH HORSES, SWIVEL PLOUGH.

A. M. Robinson, Andover, first premium, $8 00
J. D. W. French, No. Andover, second premium, 6 00

PLOUGHING WITH THREE HORSES.

M. H. Connor, West Newbury, first premium, $8 00

PLOUGHING WITH SULKY PLOUGH.

E. C. Little, Haverhill, first premium, $8 00
C. A. Bixby, Danvers, second premium, 6 00

GRAIN CROPS.

C. K. Ordway & Son, West Newbury, crop of corn, first premium, $10 00
J. J. H. Gregory, Middleton, crop of rye, first prem., 10 00
C. K. Ordway & Son, West Newbury, crop of hay, first premium, 10 00

ROOT CROPS.

John H. George, Methuen, crop of onions, first prem., $10 00
Kent & Marsh, Newburyport, crop of onions, second premium, 5 00
M. H. Connor, West Newbury, crop of cabbage, first premium, 10 00
J. G. McAllister, Lawrence, crop of cabbage, second premium, 5 00
E. C. Little, Haverhill, crop of mangolds, second prem., 5 00

SMALL FRUITS.

J. Webb Barton, Danvers, crop of strawberries, first premium, $10 00
B. W. Farnham, No. Andover, crop of strawberries, second premium, 5 00
Fred Stultz, West Newbury, crop of blackberries, first premium, 10 00

IMPROVING WET MEADOW AND WASTE LAND.

M. E. Cutter, West Newbury, first premium	$15 00

OTHER AWARDS.

Awarded by Committee on Farms	$30 00
" " " " Grapes	25 00
" " " " Poultry	116 00
" " " " Harrows	14 00
" " " " Agricultural Implements	49 50
" " " " Dairy	9 00
" " " " Cottages	9 00
" " " " Bread and Canned Fruit	24 50
" " " " Pears	72 00
" " " " Apples	64 00
" " " " Peaches, Grapes, etc.	50 00
" " " " Plants and Flowers	97 25
" " " " Vegetables	178 00
" " " " Grain and Seed	19 00
" " " " Counterpanes and Afghans	23 00
" " " " Carpets and Rugs	14 00
" " " " Manufactures from Leather	15 00
" " " " Manuf. and General Misc.	7 00
" " " " Fancy Work	48 00
" " " " Art Work	44 00
" " " " Work by Children	18 00

RECAPITULATION.

Awarded for Ploughing,		$78 00
FARM STOCK.		
Awarded for Fat Cattle,	$12 00	
" " Bulls,	62 00	
" " Milch Cows,	24 00	
" " Herds of Milch Cows,	15 00	
" " Heifers,	52 00	
" " Working Oxen and Steers,	24 00	
" " Steers,	30 00	
" " Teams used on Farms,	13 00	
" " Horses,	216 00	
" " Swine,	78 00	
" " Sheep,	27 00	
" " Poultry,	116 00	
		$669 00
FIELD AND EXPERIMENTAL CROPS.		
Awarded for Grain Crops,	$30 00	
" " Root Crops,	35 00	
" " Fruit Crops,	25 00	
		$90 00
FARM AND GARDEN PRODUCTS.		
Awarded for Grain and Seed,	$19 00	
" " Vegetables,	158 00	
" " Fruits,	189 00	
" " Plants and Flowers,	67 25	
		$433 25
DAIRY PRODUCTS.		
Awarded for Butter,	$7 00	
" " Dressed Poultry and Eggs,	2 00	
		$9 00

DOMESTIC MANUFACTURES.

Awarded for	Bread, Canned Fruit, etc.,	$24 00		
" "	Counterpanes and Afghans,	25 00		
" "	Carpetings and Rugs,	14 00		
" "	Articles Manuf. from Leather,	15 00		
" "	Manufactures and General Mdse.,	7 00		
" "	Fancy Work,	48 00		
" "	Works of Art,	44 00		
" "	Children's Work,	15 00		
				$192 50

MISCELLANEOUS.

Awarded for	Agricultural Implements,	$57 50		
" "	Farms,	30 00		
" "	Granges,	25 00		
" "	Carriages,	9 00		
" "	Essays and Reports,	25 00		
" "	Imp. wet meadow and waste land,	15 00		
				$161 50

TOTAL,

The amount of $1,609.25 was awarded to 360 individuals and firms in 30 different cities and towns in the county as follows:

Amesbury,	$63 50	Merrimac,	$15 00
Andover,	22 00	Middleton,	14 50
Beverly,	6 00	Newburyport,	34 00
Boxford,	52 50	Newbury,	51 50
Bradford,	40 00	North Andover,	100 50
Danvers,	78 00	Peabody,	68 00
Georgetown,	38 00	Rockport,	3 00
Groveland,	36 00	Rowley,	24 00
Haverhill,	416 25	Salem,	12 00
Ipswich,	7 00	Salisbury,	2 00
Lawrence,	80 00	Saugus,	18 00
Lynn,	84 00	Swampscott,	3 00
Lynnfield,	28 00	Topsfield,	3 00
Marblehead,	8 00	Wenham,	17 00
Methuen,	56 00	West Newbury,	228 50

FINANCIAL STATEMENT.

Receipts for Admission to Hall,	$1292 50	
" " " " Dinner,	168 00	
" " Grounds for various purposes,	174 25	
		$1634 75
Expenses, including Tent-hire, Halls and Dinner,		1213 43
Amount paid Treasurer,		$421 32

1894.

PREMIUM LIST OF

Essex Agricultural Society,

FOR THE

SEVENTY-FOURTH ANNUAL CATTLE SHOW AND FAIR,

To be held at Haverhill.

Duties of Trustees.

The trustee of each town is instructed to see the several members of Committees in his town previous to the Show, and urge upon them the importance of attending to their duties. Also impress upon exhibitors from localities near to the Exhibition, the importance of entering their exhibits for the hall, the afternoon and evening of Monday, in fairness to those from a distance, who are obliged to come Tuesday.

To be prompt at the meeting in June for filling Committees, and at the meeting of the Society for filling vacancies in committees on the first day of the Exhibition, making sure that the names proposed at those meetings are of persons who will serve.

Duties of Committees.

Committees on live stock and articles exhibited on the Fair Grounds should appear at the Secretary's office on the grounds, at one o'clock, punctually, on the first day of the exhibition, and there organize, take the books of entry, and proceed at once to business. Committees in hall, should take the books of entry from the Superintendent, promptly after the entries close.

Full reports of awards by committees, on the blanks furnished by the Secretary, to be signed by all the members acting on the same, are required of each committee.

Three members of any committee consisting of more than that number are authorized to act.

☞No member of the Society shall act on any committee of which he is an exhibitor in the same class.

The Diploma of the Society being considered the highest premium that can be awarded, no committee is authorized to award it, except for animals and articles *of special merit*, deserving of indorsement and recommendation by the Society.

No committee is authorized to award gratuities, except the committee on agricultural implements, carriages, bread, honey and canned fruits, domestic manufactures, fruits, vegetables in hall, and flowers; or any premium, unless the rules of the Society have been strictly complied with. Neither shall they award premiums or gratuities in excess of the amount appropriated.

No gratuity is to be awarded of less than fifty cents.

The several committees are requested to affix premium cards, and also on animals, blue, white, and red printed premium ribbons (which may be had of the Secretary or assistant on the grounds and at the hall), for the several animals or articles designating the grade of premium awarded each, and the name of the person to whom awarded, and special care should be taken that the cards issued correspond with the awards in their report to the Society.

The reports of awards of premiums on ploughing and on animals and articles exhibited at the Show, must be delivered promptly to the Secretary for announcement on Thursday.

The Society offers liberal premiums for the best reports of committees; and the chairmen of the several committees are requested to present to the Secretary a full report explanatory of the opinions of the committee on the matter referred to them, within two weeks after the awards are made at the Show, for publication in the Transactions.*

Reports on farms, crops, etc., to be presented previous to the meeting of the Trustees in November.

Any member of a committee who cannot serve on the same *is requested to give notice* to the Secretary, *before the Show*, so that the vacancy may be filled.

Each member of the several committees will receive a ticket of admission to the hall of exhibition, on application to the Secretary.

*Chairmen of committees will please notice this request.

General Rules.

Competitors are requested to carefully read the rules and premium list before making entries.

Claims (entries) for premiums to be awarded at the Exhibition on the Fair Grounds,) other than live stock, must be entered with the Secretary of the Society, or his agent, and in the Exhibition Hall, on or before 11 A. M., of the first day thereof.

All entries of live stock must be entered with the Secretary at least one week previous to the holding of the Fair, and no entries will be received after that date.

Any person *not a member of the Society*, awarded seven dollars and upwards, shall receive a certificate of membership, for which three dollars of his award will be taken to increase the funds of the Society.

Diplomas awarded will be delivered and premiums paid, to the person to whom the premium or gratuity is awarded, or an agent duly authorized, on application to the Treasurer, at First National Bank, Salem, on and after the fourth Monday of November.

All premiums and gratuities awarded, the payment of which is not demanded of the Treasurer on or before the first day of September next succeeding the Exhibition, will be considered as given to increase the funds of the Society.

In all cases the reports of awards of premiums and gratuities made by the several committees and adopted by the Society shall be final. *Committees should see that the premium cards issued, correspond with the premiums and gratuities awarded in their reports.*

No person shall be entitled to receive a premium, unless he complies with the conditions on which the premiums are offered, and by proper entry as required, gives notice of his intention to compete for the same; and committees are instructed to award no premium unless the animal or article offered is worthy.

No animal or object that is entered in one class, with one committee, shall be entered in another class, except town teams, fat cattle, working oxen, working steers, (three year old steers may be entered for ploughing in a double team) and farm horses, which may be entered for ploughing, and milch cows, which may be entered with a herd.

In regard to all subjects for which premiums are offered, it is to be distinctly understood that the Trustees reserve to themselves the right of judging the quality of the animal or article offered; and that no premium will be awarded unless the objects of them are of decidedly superior quality.

Pure Bred Animals, defined by the State Board of Agriculture.

The proof that an animal is so bred should be a record of the animal or its ancestors, as recorded in some herd book, recognized by leading breeders and the public generally, as complete and authentic.

Standards adopted:—American Jersey C. C. Register and American Jersey Herd Book, Ayrshire Record and Holstein Herd Book.

Premiums to be Awarded at the Show.

The Committees will take notice that no premium will be awarded unless the animals or objects are of a decidedly superior quality.

DIPLOMAS may be awarded for ANIMALS OR ARTICLES of *special* merit, in all departments of the Fair.

Cattle and other Farm Stock.

TO BE ENTERED IN THE NAME OF THEIR REAL OWNER.

All animals to be eligible to a premium, shall have been raised by the owner within the County, or owned by the exhibitor within the County, four months previous to the date of Exhibition, except Working Oxen, and Working Steers.

All animals, whether teams for ploughing, or animals entered for premium or exhibition, will be fed during the Exhibition, and longer when they are of necessity prevented from leaving, at the expense of the Society.

FAT CATTLE.

Fat cattle, fatted within the County, regard being had to the manner of feeding, and the expense thereof, all of which shall be stated by the exhibitor in writing, and returned to the Secretary, with committee's report.

For Pairs of Fat Cattle, premiums, $7, 5
For Fat Cows, premiums, $7, 3

BULLS.

*Ayrshire, Jersey, Short Horn, Devon, Holstein, Guernsey or of any other recognized breed, for each breed.

Two years old and upwards, premiums, $7, 5
Under two years, for each breed, $5, 3

BULLS OF ANY AGE OR BREED.

For the best bull of any age or breed, with five of his stock not less than one year old, quality and condition to be taken into account, and especially the adaptability of the animal to the agriculture of the County. Diploma and $10

NOTE.—Competitors are required to give a written statement of pedigree, and committees are requested to be particular in this respect, and return them to the Secretary with report.

MILCH COWS.

For Milch Cows, either Foreign, Native or Grade, with satisfactory evidence as to quantity and quality of milk by weight during one full month, premiums, $10, 5

Milch Cows, Ayrshire, Jersey, Devon, Short Horn, Holstein, Guernsey, or any other recognized breed, four years old and upwards, premiums for each breed, $8, 4

For Native or Grade Cows, four years old and upwards, premiums, $8, 4

For the Cows that make the most butter in a single week from June 1st to September 15th, premiums, $8, 4

NOTE.—A written statement will be required of the age and breed of all Milch Cows entered, and time they dropped their last calf, and when they will next calve, the kind, quality and quantity of their food during the season, and the manner of their feeding, which statement is to be returned to the Secretary with Committee's report.

HERDS OF MILCH COWS.

For herds of Milch Cows, not less than five in number, to be exhibited at the Show, and a correct statement of manner of keeping and yield for one year preceding the Show, premiums, $15, 10

For the greatest produce of milk on any farm, in proportion to the number of cows producing it, not less than four, from April 1, 1893 to April 1, 1894 statement to be made of the exchanges made, manner, and expense of food, use made of milk, and such other

facts as will illustrate the entire management, special regard being had to the mode in which the account is kept, premium,
Diploma and $10

NOTE.—The above-mentioned statements are to be returned to the Secretary with Committee's report. The Committee can accept statements dating from January 1st, preceding the Show.

HEIFERS.

FIRST CLASS.—Ayrshire, Jersey, Short Horn, Devon, Holstein, Guernsey, or any other recognized breed, under four years old in milk, premiums, for each breed, $7, 5
Two years old of each breed, that have never calved, premiums, $5, 3
One year olds, and under of each breed, premiums, $5, 3
SECOND CLASS.—Native or Grade Milch, under four years old, premiums, $7, 5
Two years old, that have never calved, premiums, $5, 3
One year olds, and under, and less than two, premiums, $5, 3

WORKING OXEN AND STEERS.

Stags excluded. For pairs of Working oxen under eight and not less than five years old, taking into view their size, power, quality and training, premiums, $10, 8
For pairs of Working Steers, four years old, to be entered in the name of the owner, premiums, $8, 6

NOTE.—The Committee are required to consider the quality and shape of the cattle as well as their working capacity. The training of working oxen and steers will be tested by trial on a cart or wagon containing a load weighing two tons for oxen, and 3000 pounds for steers. ☞At the time of entry a certificate of the weight of the cattle must be filed with the Secretary.

FARM TEAMS.

For the best Farm Team of not less than two pairs of Oxen, or two pairs of Horses, owned and used on one farm, premiums, $5, 3

STEERS.

For pairs of three year old Steers, broken to the yoke, premiums, $7, 5
For pairs of two year old Steers, premiums, $6, 4
For pairs of yearling Steers, and under, premiums, $5, 3

STALLIONS, FARM AND DRAFT.

For Stallions for Farm and Draft purposes, four years old and upwards, diploma, or premiums, $10, 6
For Stallions for Farm and Draft purposes, three years old, premiums, $7, 5
For best Stallion of any age, and five colts of his stock, not less than five year old, quality and condition to be taken into account,
Diploma and $10

STALLIONS FOR DRIVING PURPOSES.

For Stallions for Driving purposes, four years old and upwards, premiums, $10, 6

For Stallions for Driving purposes, three years old, premiums, $7, 5

For best Stallion of any age and five colts of his stock, not less than one year old, quality and condition taken into account, Diploma and $10

NOTE.– No stallion will be entitled to a premium unless free from all apparent defects capable of being transmitted. All stallions entered in either class must have been owned by the exhibitor four months previous to the exhibition.

BROOD MARES, FARM AND DRAFT PURPOSES.

For Brood Mares for Farm and Draft purposes, with their foal not more than eight months old, by their side, premiums, $10, 6, 4

BROOD MARES, DRIVING PURPOSES.

For Brood Mares for Driving purposes, with their foal not more than eight months old, by their side, $10, 6, 4

NOTE.—No brood mare will be entitled to a premium unless free from all apparent defects capable of being transmitted.

FAMILY HORSES.

For Family Horses, premiums, $8, 6, 4

NOTE.—No horse will receive a premium unless free from all unsoundness.

GENTLEMEN'S DRIVING HORSES.

For Gentlemen's Driving Horses, premiums, $8, 6

FARM HORSES.

For Farm Horses weighing 1200 lbs. and over, prem., $8, 6
For Farm Horses weighing less than 1200 lbs. premiums, $8, 6

NOTE.—No horse will be allowed except those actually used on farms, whether the owner has a farm or not. The weight of load to be used in trial of Farm Horses is to be fixed upon by the committee of arrangements for drafting, the difference in the load for horses of 1200 lbs. and over, and those under 1200 lbs. to be 1000 lbs. and between the two classes of pairs 2000 lbs. No obstruction shall be placed either before or behind the wheels in trials of Draft horses of either class, but wheels shall be blocked behind to hold the load when a team stops going up hill.

PAIRS OF FARM HORSES, WEIGHING 2500 LBS. AND OVER.

For pairs of Farm Horses weighing 2500 lbs. and upwards (see above note), premiums, $8, 6

PAIRS OF FARM HORSES, WEIGHING LESS THAN 2500 LBS.

For pairs of Farm Horses weighing less than 2500 lbs. (see above note), premiums, $8, 6

COLTS FOR FARM PURPOSES, 3 AND 4 YEARS OLD.

For Mare or Gelding four year old Colts, premiums, $7, 5
For Mare or Gelding three year old Colts, premiums, $5, 3

COLTS FOR FARM PURPOSES, 1 AND 2 YEARS OLD.

For Stallion, Gelding or Mare, two year old Colts, prem., $7, 5
For Stallion, Gelding, or Mare, yearling Colts, premiums, $5, 3

COLTS FOR DRIVING PURPOSES.

THREE AND FOUR YEARS OLD.

For Mare or Gelding four year old Colts, premiums, $7, 5
For Mare or Gelding three year old Colts, premiums, $5, 3

ONE AND TWO YEAR OLD.

For Stallion, Gelding or Mare two year old Colts, prem., $7, 5
For Stallion, Gelding or Mare, yearling colts, premiums, $5, 3

SWINE,—LARGE BREEDS.

Large Breeds, viz: Cheshire, Berkshire, Chester County Whites, Poland China, Large Yorkshire, weighing more than 300 lbs. at maturity.

For Boars, premiums, $6, 4
For Breeding Sows with their pigs by their side, prem., $6, 4
For Litters of Weaned Pigs, not less than four, between two and four months old, premiums, $6, 4

SWINE,—SMALL BREEDS.

Small breeds, such as Suffolk, Essex, Small Yorkshire, China, and any other breed or grade, weighing less than 300 lbs. at maturity.

For Boars, premiums, $6, 4
For Breeding Sows with their pigs by their side, prem., $6, 4
For Litters of Weaned Pigs, not less than four, between two and four months old, premiums, $6, 4

SHEEP.

For Flocks of Sheep not less than ten in number, each Breed, premiums, $8, 6
For best Buck, premium, $8,
For lots of Lambs not less than four in number between four and twelve months old, premiums, $5, 3

POULTRY.

For pairs of Fowls, Light Brahmas, Dark Brahmas, Buff Cochins, Partridge Cochins, Black Cochins, White Cochins, Plymouth Rocks, White Plymouth Rocks, Dominiques, White Leghorns, Brown Leghorns, Dominique Leghorns, Black Spanish, Hamburgs, Polish, Games, Dorking, Bantams, Black, White and Mottled Javas, Wyandottes, White Wyandottes, Golden Wyandottes, Black and White Minorcas, Red Caps, Andalusias, Langshangs, and other recognized varieties, each variety, premiums, $2 1,

For pairs of Chickens of above varieties, premiums,

For the best breeding pen of each variety—Diploma of the Society.

For the best pairs of Native Fowls, premiums, $2, 1

Pairs can be exhibited in "breeding pens," by marking the competing female (with a ribbon or colored string), which, with the male will form the pair.

For lots of Turkeys, and Alesbury, Rouen, Caouga, Pekin, White and Colored Muscovey, and Brazilian Ducks, and Toulouse, Emden, Brown China, and African Geese, premiums, $2, 1

For 10 or more Fowls exhibited, whether thoroughbreds, crossed or mixed, with an account for one year, showing cost and method of keeping, production and profit, premiums, $8, 6, 5

As above, with an account for six months, premiums, $5, 3, 2

Any exhibitor interfering with the Judges in the discharge of their duties or interfering with, or handling any specimen on exhibition, other than his own, shall forfeit all claim he may have in the premium list.

All breeds exhibited separately and to be judged by the rules of the "American Standard of Excellence."

For best exhibit of Poultry Appliances, $5

PLOUGHING.

GENERAL NOTE ON PLOUGHING.—Stags are excluded. Teams must be entered in the names of their owners, and only double ox-teams to have drivers. A team consisting of one pair of oxen and a horse will be considered a double team. The owners of separate teams may unite the same and be allowed to compete for premiums. The ploughmen and drivers must have been residents of the County at least three months before the exhibition. Those who intend to be competitors must give notice to reach the Secretary on or before Saturday previous to the show. The lands will be staked, but each ploughman will be required to strike out his own lands in the presence of the "Committee on Striking out grounds for Ploughing," after half past nine o'clock in the morning of the trial. Ploughmen with land side ploughs are to back furrow three furrows on each side of the stakes set, the last furrow to be of the depth required in the class. Ploughmen, with swivel ploughs to turn the outside of their furrow to the stakes on one side, and to finish one foot from the stake on the other. Committees to note and report the kind of plough used.

PLOUGHING WITH DOUBLE OX-TEAMS.—One eighth of an acre, at least eight inches deep, premiums, $10, 8, 6

PLOUGHING WITH SINGLE OX-TEAMS.—One-eighth of an acre at least six inches deep, premiums, $8, 6, 4

PLOUGHING WITH TWO HORSES.—With any form of Plough except Swivel, one-eighth of an acre, at least six inches deep, premiums, $8, 6, 4

PLOUGHING WITH THREE HORSES.—One-eighth of an acre, eight inches deep, without driver, premium, $8

Same with four horses, with driver, premium, $8

PLOUGHING WITH SWIVEL PLOUGH.—One-eighth of an acre, with double ox-teams, at least eight inches deep, premiums, $8, 6

One-eighth of an acre with single ox-teams, at least six inches deep, premiums, $8, 6

One-eighth of an acre with horse teams, consisting of two horses, ploughing at least six inches deep, premiums, $8, 6

PLOUGHING SULKY PLOUGH.—For the best performances, taking into account ease of draft, amount and quality of work,

Sulky Plough, Landside, premiums, $8, 6

HARROWS.

For the best Harrow exhibited, and its merits shown by actual test upon the ploughed ground, $8, 6

NOTE.—Entry must be made with the Secretary before the day of the trial with description of the Harrow.

AGRICULTURAL IMPLEMENTS.

For the best collection of Implements and Machines (no article offered in *collection* will be entitled to a separate premium), Diploma and $10

Best Market Wagon, premium, $5
Best Farm Wagon, for one or two horses, premium, $3
Best Horse Cart, premium, $5
Best Hay, Straw or Corn Cutter, premium, $1.50
Best Ox Yoke, complete, premium, $1.50
Best Fruit Evaporator, with sample of work, premium, $5
Best set of Horse Shoes, including those for over-reaching, interfering and stumbling horses, premium, $5

For implements not specified above, the Committee may at their discretion award $40.

No premium or gratuity will be awarded for any Mower, Horse Rake, Tedder, or other Machine or Implement, the merit of which can be known only by actual trial in the field; but manufacturers are invited to offer the same for exhibition and inspection.

CARRIAGES.

For carriages built in the County, and exhibited by the manufacturer. Diploma, and thirty dollars in gratuities, may be awarded by the Committee.

In Exhibition Hall.

Committees on articles exhibited in the hall should be especially careful that the premium or gratuity cards issued with the names, and sums awarded them, correspond with those in their reports to the Society.

Committees and Exhibitors will be governed by instructions, under heading of "Duties of Committee," "General Rules," "Premiums to be awarded at the Show," see first pages, and under "Fruit," "Domestic Manufactures," and "Flowers."

☞All Fruit, Flowers, Vegetables, and Domestic Manufactures, must be the product of Essex County, to be entitled to a premium or gratuity.

GRANGE EXHIBIT.

The Society offers seventy dollars to be divided in four premiums for exhibits by the different Granges in Essex County, as follows:—Premiums, $25, 20, 15, 10,

NOTE.—This exhibit includes all Fruit, Vegetables, and Domestic Manufactures that are exhibited in any other department in Exhibition Hall.

DAIRY.

For specimens of Butter made on any farm within the County the present year, samples of not less than five pounds to be exhibited, with a full account of the process of making and management of the Butter, premiums. $8, 6, 4

For Specimens of New Milk Cheese, made on any farm in the County the present year, samples of not less than fifty pounds to be exhibited, with statement in writing of the method of making and preserving the same, premiums, $8, 6, 4

NOTE.—Each lot presented for premium and the statement accompanying it, must be numbered, but not marked so as to indicate the claimant; any public or known mark must be completely concealed nor must the competitors be present t the examination.

To the person who shall furnish to the Society satisfactory evidence of the greatest quantity of Butter made from any quantity of milk, being the whole produce of any single cow, for the first week of June, July, August and September next, stating the whole amount of Butter produced in each week, also the time when the cow dropped her last calf, and her feed and management all to be taken into account in making the award, premiums,

Diploma and $10, 5

NOTE.—The object in offering these last premiums is to elicit inquiry as to the value and quality of milk for the production of butter. As far as practicable it is desirable that the race and pedigree of the cow shall be given.

DRESSED POULTRY AND EGGS.

For the best pair of dressed Fowls, Chickens, Ducks, and Geese, weight to be given, premium for each pair, $2

For the best 12 eggs from Asiatic, American, Game, French and Spanish classes (Hamburgs, Polish, Dorkings to compete in the Spanish class), premium for each class, $1

BREAD AND CANNED FRUIT.

For White Bread made of Wheat flour, premiums, $3, 2, 1

For bread made from Graham flour, premiums, $2, 1

For bread made from other grains, or other grains mixed with wheat, premiums, $1.50, 1

All bread, entered for premiums, to be in loaves weighing not less than one pound each, and not to be less than twenty-four hours old, with a full written statement over the signature and address of the maker, stating the kind of flour used, quantity of each ingredient, how mixed, and length of time kneaded and raised, and how long baked, *which statements on all premium bread are to be sent to the Secretary with report of the Committee for publication.*

For first and second best collection of Pickles, Preserved Fruits, and Jellies made from products of the County, *when premiums are awarded, the method of making to be sent to the Secretary by the Committee for publication*, premiums, $3, 2

For the first and second best five pounds of Dried Apples, grown and dried within the County, with statements of process used and amount of labor and time required in preparing and drying, *such statement on premium fruit to be given to the Secretary for publication*, premiums, $3, 2

In addition to the above, are placed in the hands of the Committee for gratuities on other articles entered in this department, products of this County, deemed worthy. $5

BEES, HIVES AND HONEY.

For the first and second best display of Bees, Hives and Apiarian Implements, accompanied with a written description of the bees, hives, etc., number of hives in use and amount of surplus honey taken from them during the season, premiums, $5, 3

First and second best Honey, ten pounds in comb and one pound extracted in made the County, with statement signed of kind of bees and hive, and time of year when honey was made, premiums, $3, 2

Fruit.

All fruit must be entered in the name of the grower before 11 o'clock on the first day of the exhibition, and each exhibitor must certify to the same on the Entry Book, or on lists of the varieties of each class of fruit, or be filed when entry is made. (Committees are not authorized to make awards to those who do not comply with this rule.)

Tables will be labelled in a *conspicuous manner* by the hall committee *before the entry of exhibitors*, with the names of fruit, for which premiums are offered, all others of same class fruit to be labelled miscellaneous. Exhibitors must place their several varieties of each class of fruit where indicated by such labels, or be considered by the committee as not competing for premium.

Plates of collections of fruit, when premiums are offered therefor, must be entered and placed by the exhibitor on the table assigned for the exhibit of collections of fruit.

To entitle exhibitors to receive premiums and gratuities awarded, they are required (when requested by the committee) to give information in regard to the culture of their fruit.

PEARS.

For best twelve specimens of the following varieties, which are recommended for cultivation in Essex County: Bartlett, Belle Lucrative, Bosc, Anjou, Angouleme, Dana's Hovey, Lawrence, Louise Bonne, Onondaga, Paradise d'Automne, Seckle, Sheldon, Urbaniste, Vicar, Comice, Howell, and Clairgeau, each, premium. $3

Doyenne d'Ete, Gifford and Clapp's Favorite (ripening early), are recommended for cultivation, but no premium is offered.

For each dish of twelve best specimens of any other varieties, deemed worthy by the committee, premium, $1.50

For best collection of Pears, recommended for cultivation, premium, $6

In addition to the above, are placed at the disposal of the committee, to be awarded in gratuities of not less than $1 each, $20

APPLES.

For best twelve specimens of the following varieties, which are recommended for cultivation in Essex County: Baldwin, Danvers Sweet, Tompkins King, Granite Beauty, Red Russett, Tolman's Sweet, Bailey Sweet, Drap d'Or, Hubbardston, Hurlburt, Porter, Pickman Pippin, Roxbury Russett, Rhode Island Greening, Sweet Baldwin, Gravenstein, Hunt Russett, Smith's Cider, Snow, premium for each, $3

Red Astrachan, William's Favourite, Tetofsky and Sweet Bough are recommended for cultivation, but no premium is offered (ripening early).

For best twelve specimens or any other varieties deemed worthy by the committee, premium for each variety, $1.50

For best collection of Apples, recommended for cultivation, premium, $6

For best twenty-four specimens of any variety of Crab Apple deemed worthy by the committee, $1.50

In addition are placed at the disposal of the committee, to be awarded in gratuities of not less than $1 each, $20

PEACHES, GRAPES, AND ASSORTED FRUITS.

For best nine specimens of Freestone, White Flesh, Yellow Flesh, Essex County Seedling, each variety, $2

For best collection of Peaches, premium, $3

For Champion, Lemon, or Orange Quinces, premium, $3

For Plums, each variety, premium, $2

For best four bunches of Concord, Worden's Seedling, Brighton, Hartford Prolific, Delaware, Martha, Moore's Early, Niagara Grapes, each variety, premium, $3

For Cold House Grapes, produced with not over one month's artificial heat, premiums, $4, 3

For best collection of ten varieties, not less then ten pounds in all, premiums, $7

For best specimens of four bunches of Grapes, varieties other than above, deemed worthy by the committee, premium, $1.50

For baskets of Assorted Fruits, premiums, $4, 3

In addition are placed at the disposal of the committee, to be awarded in gratuities, of not less than 50 cents each, $25

PLANTS AND FLOWERS.

RULES AND REGULATIONS.

1. All Plants and Flowers for competition and exhibition must be entered for examination by the committee on or before eleven o'clock, on the first day of the Fair, and all such Plants and Flowers must have been grown by the competitor, except native plants and flowers, and flowers used in bouquets, and baskets of flowers and floral designs, all of which (plants and flowers) must have been grown within the County.

2. When a certain number or quantity of Plants and Flowers is designated in the schedule, there must be neither more nor less than that number or quantity of specimens shown.

3. When only one premium from each exhibitor is offered for any article, only a single specimen or collection can compete, but when a second or third premium is offered, one, two or three specimens or collections may be exhibited for competition, but no variety can be duplicated.

4. No premium shall be awarded unless the specimens exhibited are of superior excellence, possessing points of superiority and worthy of such premium, not even if they are the only ones of their kind on exhibition.

5. No specimen entered for one premium shall be admitted in competition for another different premium.

6. Competitors will be required to furnish information (if the committees so request), as to their modes of cultivation, or in the case of Native Plants and Flowers, where such were found.

7. All Plants exhibited for premiums must have the name legibly and correctly written on stiff card, wood, or some other permanent and suitable substance, and so attached to same as to be easily seen. Flowers when specified to be named to comply also with above rule.

8. Plants in Pots to be entitled to premiums must show skillful culture in the profusion of bloom and in the beauty, symmetry and vigor of the specimens; also Bouquets, Baskets, Design Work, etc., must show taste, skill, and harmony in arrangement, both as to colors and material they are made of, and purposes for which they are intended.

9. All Flowers exhibited must be shown upon their *own stem*, flowers in "Design" work alone excepted; and this exception if overcome and avoided, to be taken into account by the committee in awarding the premiums.

10. The Committee are authorized to award gratuities for any new and rare plants and flowers or "Designs of merit for which no premium is offered, but in no case shall the total sum (premiums and gratuities together), exceed the amount $150.00, limited by the Society for this department.

11. No member of the Committee for awarding premiums or gratuities shall in any case vote or decide respecting an award for which such member may be a competitor, or in which he may have an interest, but in such case such member shall *temporarily* vacate his place upon the Committee, and such vacancy for the time being may be filled by the remaining members of the Committee, or they may act without.

12. Attention is again called to above Rules and Regulations for Plants and Flowers, and General Rules of the Society, and all articles not entered in conformity therewith will be disqualified, and premiums will be awarded only to exhibitors who have complied with said Rules, etc.

PLANTS.

Plants competing for these premiums must have been grown in pots, Native Plants excepted, etc. See Rules.

For collections Flowering and Ornamental Foliage plants, at least 25 specimens, premiums, $10, 5

For collection Palms, at least 5 specimens, 5 varieties, premium, $1

For collection Ferns (cultivated), at least 5 specimens, 5 varieties, premium, $1

For collection Dracenas, at least 5 specimens, 5 varieties, premium, $1

For collection Crotons, at least 5 specimens, 5 varieties, premium, $1

For collection Fancy Caladiums, at least 5 specimens, 5 varieties, premium, $1

For collection Gloxinias, at least 5 specimens, 5 varieties, premium, $1

For collection Begonias, tuberous rooted, at least 5 specimens, 5 varieties, premium, $1

For collection Begonias, 5 specimens, 5 varieties, premium, $1
For collection Coleus, 10 specimens, 10 varieties, premium, $1
For collection Fuschias, 5 specimens, varieties, premium, $1
For collection Cyclamen, 5 specimens, 5 varieties, premium, $1
For collection Geraniums, double, 10 specimens, 10 varieties, premium, $1
For collection Geraniums, single, 10 specimens, 10 varieties, premium, $1
For collection Geraniums, fancy, 10 specimens, at least 5 varieties, premium, $1
For collection Hibiscus, 5 specimens, 5 varieties, premium, $1
For collection Carnation Pinks, 10 specimens, at least 5 varieties, premium, $1
For collection Calla Lilies, 5 specimens, premium, $1
For specimen English Ivy, premium, $1
For collection of wood of native trees in sections, suitable for exhibition, showing bark and the grain of the wood, all correctly named with botanical and common name, at least 50 varieties, each variety to be shown in two sections, one of which to be a cross section and neither to be more than four inches in length or diameter, premiums, $5, 3

FLOWERS.

For collection Cut Flowers, cultivated, 100 specimens, at least 50 varieties, named, $5, 3
For collection Cut Flowers, native, 100 specimens, at least 50 varieties, named, $5, 3
For pair of Bouquets, for vases, green-house flowers, prem., $2, 1
For pair of Hand Bouquets, green-house flowers, prem., $2. 1
For pair of Bouquets, for vases, of native flowers, prem., $2. 1
For pair of Bouquets, for vases, of garden flowers, prem., $2. 1
For Basket of green-house flowers, premiums, $2, 1
For Basket of Native Flowers, premiums, $2. 1
For Basket of Garden Flowers, premiums, $2, 1
For arrangement of Native Flowers and Autumn Leaves, premiums. $3. 2
For Floral Designs, choice cultivated flowers, premiums, $5, 3
For Floral Designs, native flowers, premiums, $3, 2
For collections Japan Lilies, hardy, named, premiums, $3, 2
For collections Phlox, hardy perennial, named, premiums, $2. 1
For collections Pansies, at least 50 specimens neatly and artistically arranged, premiums, $2. 1
For collections of Native and Introduced Weeds, with common and botanical name attached, premiums, $3. 2
For twelve Dahlias, large flowering, at least six varieties, named, premium, $1
For twelve Dahlias, Pompon or Lilliputian, at least six varieties, named, premium, $1
For twelve Dahlias, single, at least six varieties, named, premium, $1
For twelve Petunias, double, at least six varieties, named, premium, $1

For twelve Gladiolas (spikes), at least six varieties, named, premium, $1
For twelve Japan Lilies, at least six varieties, named, prem., $1
For twelve Geraniums, double, at least six varieties, named, premium, $1
For twelve Geraniums, single, at least six varieties, named, premium, $1
For twelve Phlox, hardy perennial, at least six varieties, named, premium, $1
For twelve Cannas, at least six varieties, named, premium, $1
For twenty-four Carnation Pinks, at least six varieties, named, premium, $1
For twenty-four Verbenas, at least six varieties, named, premium, $1
For twenty-four Roses, at least six varieties, named, premium, $1
For twenty-four Garden Annuals, at least twelve varieties, named, premium, $1
For twelve Calendulas, at least two varieties, named, prem., $1
For twelve Asters, Double Victoria, premium, $1
For twelve Asters, Double, Truffaut's Peony flowered, prem., $1
For twelve Asters, Pompone, premium, $1
For twelve Phlox Drummondii, in variety, premium, $1
For twelve Nasturtiums, at least six varieties, premium, $1
For twenty-four Pansies, in variety, premium, $1
For twenty-four Zinnias, double, in variety, premium. $1
For twenty-four Marigolds, African, in variety, premium, $1
For twenty-four Marigolds, Dwarf French, in variety, prem., $1
For twenty-four Petunias, single, in variety, premium, $1
For display of Coxcombs, in variety, premium, $1
For twelve Scabiosas, in variety, premium, $1
For twelve Delphiniums, in variety, premium, $1
For twelve Dianthus (double, annual), in variety, premium, $1
For twelve Salpiglossis, in variety, premium, $1
For collection of Sweet Peas, premium, $1

VEGETABLES.

Rules for Fruit apply to Vegetables.

Beets—For best twelve specimens, Eclipse, Dewing, and Edmands, premiums, each variety, $3
Carrots—For best twelve, Short Top, Long Orange and Danvers Intermediate, premium, each variety, $3
For best twelve, Short Horn Orange carrots, $3
Mangold Wurtzels—For best six specimens, premium, $3
Flat Turnips—Twelve specimens. For best Purple Top and White Flat, premium, each variety, $3
Ruta Bagas—Twelve specimens. For best Yellow and White, premium, each variety. $3
Parsnips—For the best twelve specimens, premium, $3
Onions—Twelve specimens. For best Danvers, Yellow Flat, and Red, premium, each variety. $3
Potatoes—Twelve specimens. For best Early Rose, Beauty of Hebron, Clark's No. 1, Pearl of Savoy, Early Maine, premium, each variety, $3

Cabbages—For best three specimens, Savoy, Fottler's Drum-Head, Stone Mason Drumhead, Red Cabbage, All Seasons, Deep Head, each variety, premium, $3
For next best, each variety, premium, $2
Cauliflowers—For best three specimens, premium, $3
For next best, premium, $2
Celery—For best four roots, premium, $2
Sweet Corn—For twelve ears ripest and best Early, premium, $3
For best twelve ears in milk, Late, premium, $3
Squashes—For best three specimens, Marrow, American Turban, Hubbard, Marblehead, Essex Hybrid, Bay State, Sibley, Butman, each variety, premium, $3
Melons—For best three specimens, Nutmeg, Musk, Cassaba, Salmon Flesh, each variety, premium, $2
For best two specimens Watermelons, premium, $2
Tomatoes—For best twelve specimens, Round flat and Round Spherical, each variety, premium, $3
For exhibition of greatest variety of Tomatoes, premium, $3
Cranberries—For pecks of cultivated, premiums, $3, 2, 1
For collection of vegetables, not less than three of a kind, premiums, $5, 3, 2
Placed at the disposal of the committee for whatever appears meritorious, $30

☞ No competitor for premium to exhibit more or less number of specimens of any vegetables than the premiums are offered for.

Collections of Vegetables where premiums are offered for a number of varieties must be entered and placed, not less than three of a kind, by themselves on the tables assigned for collections. No collection shall receive but one premium. Specimens of any varieties, in such collections are not to compete with specimens of the same variety placed elsewhere. Exhibitors of such collections however, are not prevented from exhibiting *additional* specimens of any variety with and in competition with like variety. All vegetables must be entered in the name of the grower of them.

Size of Vegetables.—Turnip Beets to be from 2 to 4 inches in diameter; Onions, 2 1-2 to 4 inches in largest diameter; Potatoes to be of good size for family use; Squashes to be pure and well ripened, Turban, Marrow, Hubbard, Marblehead, all to be uniform size.

GRAIN AND SEED.

For best peck of Shelled Corn, Wheat, Oats, Barley, Rye, Buckwheat, and Field Beans, each, premium, $1
For 25 ears of Field Corn, premiums, $5, 3, 2
For 25 ears of Pop Corn, premiums, $3, 2
For collections of Field and Garden Seeds, premiums, $8, 6, 4, 2
All grain or seed *must have been grown by the exhibitor in the County* to receive a premium.

Domestic Manufactures.

Contributors must deposit their articles at the Hall before 11 o'clock on the first day of the Exhibition. Articles not thus deposited will not be entitled to a premium. Gratuities will be awarded for articles of special merit for which no premium is offered; but

no premium or gratuity will be awarded for any article manufactured out of the County, or previous to the last exhibition of the Society.

COUNTERPANES AND AFGHANS.

For Wrought Counterpanes having regard to the quality and expense of the material, premiums, $4, 2

Gratuities will be awarded for articles belonging to this department, the whole amount of gratuities not to exceed $25

CARPETINGS AND RUGS.

For carpets, having regard to the quality and expense of the material, premiums, $4, 2

For wrought Hearth Rug, having regard both to the quality of the work and expense of the materials, premiums, $3, 2

Gratuities will be awarded for articles belonging to this department, the whole amount not to exceed $25

ARTICLES MANUFACTURED FROM LEATHER.

For best pair hand made and machine made Men's Boots, Women's do., Children's do., each, premium, $2

Best Team, Carriage, and Express Harness, each, premium, $5

$10 are placed at the disposal of this committee, to be awarded in gratuities.

For the best exhibition of Boots and Shoes, manufactured in the County, each, premium, Diploma of the Society.

MANUFACTURES AND GENERAL MERCHANDISE.

For display of Bonnets, premiums, $4, 3

For horn Combs, not less than one dozen, premium, $2

At the disposal of the committee in this department, to be awarded in gratuities not exceeding $3 in any one gratuity, $20

FANCY WORK

Of Domestic Manufacture are not included in the above.

At the disposal of the committee in this department, to be awarded in gratuities not exceeding $3 in any one gratuity, $50

WORKS OF ART.

At the disposal of the committee in this department, to be awarded in gratuities not exceeding $3 in any one gratuity, $50

WORK BY CHILDREN.

For specimens of work performed by children under 12 years of age exhibiting industry and ingenuity, premiums, $3, 2

At disposal of committee to be awarded in gratuities, $10

List of Premiums to be Awarded by the Trustees in November.

FARMS.

Competitors for this premium must give notice of their intention to the Secretary on or before June 15th, and the farms entered for premium will be viewed by the committee twice during the year. Crops growing on farms that are entered for premium, cannot be entered with another committee for separate premiums—except crop specimens exhibited at the fair.

Any person desirous of having *his farm inspected, without entering it for premium,* may make application to the Secretary, and it will be viewed and reported upon by the committee.

For the best conducted and most improved farm, taking into view the entire management and cultivation, including lands, buildings, fences, orchards, crops, stock, and all other appendages, with statements in detail, relating thereto, premium, $30

IMPROVING WET MEADOW AND SWAMP LANDS.

For best conducted experiments relating to wet meadow or swamp lands, on not less than one acre, the course of management, and the produce, etc., for a period of two years at least, to be detailed, with a statement of all the incidental expenses, premiums, $15, 10

NOTE.—The Committee is instructed to ascertain how many, if any, reclaimed swamps in this County have been abandoned or have returned to natural grasses. Persons knowing of such, are requested to notify the Secretary or Committee.

IMPROVING PASTURE AND WASTE LANDS.

For best conducted experiments in renovating and improving pasture land, other than by ploughing, so as to add to their value for pasturage, with a statement of the same, premiums $15, 10

For best conducted experiments in renovating and improving waste lands, so as to add to their agricultural value, with statement of the same, premiums, $15, 10

No premium to be awarded to any person for a repetition of an experiment in meadow, swamp or pasture lands, for which he has already received a premium.

UNDER-DRAINING LAND.

For best conducted experiments in under-draining land, regard being had to the variety of soil, sub-soil, and other local circumstances, premiums, $15, 10

NOTE.—The same instructions under "Improving Wet Meadow and Swamp Lands" apply to this Committee.

GRAIN AND OTHER CROPS.

Claimants on Grain and Root Crops will be required to state the size of the piece of land, when they enter, and conform to the following rules: Entries of Grain Crops to be made on or before September 10th; Root Crops on or before October 10th; giving ample time for the crops to be examined by the committee before harvesting. Statement to be made in conformity with the following form, must be forwarded to the Committee previous to November 1st.

All calculations and figures given in reports of, and statements of Crops, are to be made on the *basis of an acre*, results in all cases, to be given at the rate per acre.

In pursuance of authority delegated to the Board of Agriculture by Chap. 24, of Acts 1862, Agricultural Societies receiving the bounty of the State are required to make use of the following form, and be governed by its conditions in the mode of ascertaining the amount of crops entered for premium.

ESSEX AGRICULTURAL SOCIETY.—Statement concerning a crop of————, raised by Mr. ———, in the town of ————, ———, 1893.

What was the crop of 1891? What manure was used and how much. What was the crop of 1892? What manure was used and how much? What is the nature of the soil? When, and how many times ploughed, and how deep? What other preparation for the seed? Cost of ploughing and other preparation? Amount of manure, in loads of thirty bushels, and how applied?

Value of manure upon the ground? How used? (What amount of Commercial Fertilizer used? How used? Value of same when applied?) When and how planted? The amount and kind of seed? Cost of seed and planting? How cultivated and how many times? Cost of cultivation, including weeding and thinning? Time and manner of harvesting? Cost of harvesting, including the storing and husking or threshing? Amount of crop, etc. Signed by ——— Competitor.

The committee, to whom is entrusted the award of the premiums on field crops, may award them according to their judgment, but for the purpose of furnishing accurate statistics for the benefit of agriculture, shall select certain of the crops, and require the owners thereof to measure the land and weigh the crops accurately, giving to the committee a certificate of the same, and give all possible information thereon over their own signatures, and return the same to the Secretary of the Society, to be published in the annual transactions.

In ascertaining the amount of crop, any vessel may be used and the weight of its contents once, multiplied by the number of times it is filled by the crop.

In measuring the land or weighing crops, any competent person may be employed, whether a sworn surveyor or not, and must give certificate.

The certificate shall state the weight of all crops only in a merchantable state.

In ascertaining the amount of a hay crop entered for premium, the measurement of the hay in the barn may be employed.

RULES OF MEASURE PRACTICED AND ADOPTED BY THE STATE BOARD OF AGRICULTURE.

Wheat, Potatoes, Sugar Beets, Ruta Bagas, Mangold Wurtzels,	60 lbs.	to bush.,
White Beans and Peas,	62 "	"
Corn, Rye,	56 "	"
Oats,	32 "	"
Barley, Buckwheat,	48 "	"
Cracked Corn. Corn and Rye, and other meal, except Oat,	50 "	"
Parsnips, Carrots,	55 "	"
Onions,	52 "	"

1. For the best conducted experiments of Rye, not less than twenty bushels to the acre, fifty-six lbs. to the bushel, on not less than one acre, premiums, $10, 5

2. For best conducted experiments of Wheat, not less than thirty bushels to the acre, sixty lbs. to the bushel, on not less than one acre, premiums, $10, 5

3. For best conducted experiments of Oats, not less than fifty bushels to the acre, thirty-two lbs. to the bushel, on not less than one acre, premiums, $10, 5

4. For best conducted experiments of Barley, not less than forty bushels to the acre, forty-eight lbs. to the bushel, on not less than one acre, premiums, $10, 5

5. For best conducted experiments of Indian Corn, on not less than one acre, premiums, $10, 5

6. For largest quantity and best quality of English Hay, on not less than one acre, regard being had to the mode and cost of cultivation, premiums, $10, 5

7. For best yield of Field Beans, on not less than one-half acre, and not less than twenty-five bushels per acre, premiums, $10, 5

ROOT CROPS.

1. For best conducted experiments in raising Carrots, fifty-five pounds to the bushel, premiums, $10, 5

2. For best conducted experiments in raising Parsnips, fifty-five pounds to the bushel, premiums, $10, 5

3. For best conducted experiments in raising Ruta Bagas, sixty pounds to the bushel, premiums, $10, 5

4. For best conducted experiments in raising Mangold Wurtzels, sixty pounds to the bushel, premiums, $10, 5

5. For best conducted experiments in raising Sugar Beets, sixty pounds to the bushel, premiums, $10, 5

6. For best conducted experiments in raising Onions, fifty-two pounds to the bushel, premiums, $10, 5

7. For best conducted experiments in raising Potatoes, sixty pounds to the bushel, premiums, $10, 5

8. For best conducted experiments in raising Cabbages, premiums, $10, 5

9. For best conducted experiments in raising Squashes, premiums, $10, 5

10. For best conducted experiments in raising Summer English Turnips for the market, premiums, $10, 5

Raised on not less than half an acre, and the quantity of crop to be ascertained by weight; so far as practicable the crop to be free from dirt, without tops, and in a merchantable condition at the time of measurement.

Claimants for premiums on Grain and Root Crops must forward statement to chairman of committee *before Nov. 1st.*

FOREST TREES.

1. For plantation of either of the following species of forest trees, viz.: White Oak, Yellow Oak, Locust, Birch, White Ash, Maple, Walnut, or White Pine, not less than three years old, and not less than 1000 trees, premium, $20

2. For plantation of not less than 600 trees, premium, $10

3. For ornamental trees, ten or more set on any street, road or farm, and cared for five years, premium, $10

CRANBERRIES.

For best conducted experiment in the cultivation of the Cranberry, at least two summers, on not less than twenty rods of land, with written statement of the quantity and quality of the land, expense of planting, weeding and culture, and amount of crops produced. Premium to be paid in 1892 and 1893. $15

For best experiment do., on not less than ten rods of land, premium, $10

For best do., on not less than five rods of land, premium, $5

STRAWBERRIES AND OTHER SMALL FRUITS.

For best crop of strawberries, on not less than twenty rods of land, expense of planting, culture, crop, etc., stated in writing, premium, $10

For best crop of Currants, Raspberries and Blackberries, with statement as above, premiums, each, $10

NEW WINTER APPLES.

For a new variety of Winter Apple, originated in this County, equal or superior to the Baldwin, premium, $100

For a new variety of like character originating elsewhere, provided it has been cultivated in the County sufficiently to prove it equal or superior to the Baldwin for general purposes, premium, $20

For a successful experiment in destroying the codling moth and other worms destructive to the apple, premium, $25

NOTE.—Persons who consider themselves competitors will send Post Office address to Secretary, and others in the County wishing to compete for above, must notify Secretary, and furnish a full statement of their apple, and also scions when called for under his directions, to be tested by the Society.

SEEDING POTATOES AND EXPERIMENTS.

For best seeding Potato, originating in Essex County, to equal in yield, earliness, and quality, the Early Rose, and to surpass it in one or more of these particulars, premium paid after three years' trial, $25

In testing the value of a Seeding Potato, the committee are instructed to take sworn testimony of the cultivator with regard to the yield, after having inspected the crop.

For the most satisfactory experiment to extend through five consecutive years, to settle the following facts relative to raising potatoes:—premium, $50

1st. Will whole, medium sized Potatoes, yield better results than pieces cut to two eyes?

2nd. What will be the result of continuously planting small-sized potatoes of the same strain a series of years?

3rd. Difference between hilling and flat cultivation.

4th. Effect, if any, of cutting off seed ends before planting.

5th. Effects of deep and shallow planting.

6th. Raising from sprouts alone from same strain.

7th. Can potatoes having dwarf vines be planted nearer than others?

8th. Best distance apart for seed in the drill.

9th. To show the effect of covering the top with earth at several times after they had come up.

To be raised on not less than a half acre of land, uniform in character, and all to receive the same kind and quality of manure and cultivation, and to be inspected by the committee at the time of gathering the crops.

ESSAYS AND FARM ACCOUNTS.

The Essays must be transmitted to the Secretary by the 1st of November, with sealed envelopes containing the names of their authors, respectively, which shall not be opened by the committee, nor shall the names be known to the committee, until they shall have decided upon the merit of the Essays.

For original Essays on any subject connected with Agriculture, in a form worthy of publication, premiums, $15, 10, 8

For best statement of Actual Farm Accounts, drawn from the experience of the claimant, in a form worthy of publication, premium, $10

For reports of Committees upon subjects for which premiums are offered, premiums, $10, 8, 6

Committee—G. L. Streeter, Salem; N. M. Hawkes, Lynn; D. E. Safford, Hamilton; Geo. E. Blodgette, Rowley; J. M. Danforth, Lynnfield.

LIBRARY.

Committee—Andrew Nichols, Danvers; Henry Brooks, Salem; B. P. Ware, Marblehead; J. M. Danforth, Lynnfield.

NEW MEMBERS.

For the person who obtains the largest number of new members for the Society from any Town or City before the first day of November next, premium, $6

NOTE.—Names of new members, with name of person procuring them, can be sent as fast as obtained, to the Secretary of the Society, who will make a record of them.

Persons paying three dollars will receive a "Certificate of Membership" which is for life. No fines or assessments are ever imposed and members are entitled to vote in all its transactions, with the free use of the Library and a copy of the publication of Society's transactions each year.

Committee—Secretary, John M. Danforth, Lynnfield.

TREADWELL FARM.

Committee—Benj. P. Ware, Marblehead; C. C. Blunt, Andover; B. P. Pike, Topsfield; G. B. Blodgette, Rowley; George B. Bradley, Methuen; John M. Danforth, Lynnfield.

AUDITORS.

Committees—J. Hardy Phippen, Salem; Benj. P. Ware, Marblehead; E. Pope Barrett, Peabody.

FARMERS' INSTITUTES.

Francis H. Appleton, James P. King, C. C. Blunt, O. S. Butler, John M. Danforth, Lynnfield.

DELEGATES.

From the Essex Agricultural Society to attend Exhibitions of Societies, Farmers' Clubs and Fruit Growers' Associations in Essex County, and report any information that shall seem valuable for publication.

The Secretary to be notified of the time of holding their exhibition, who will notify the chairman of Committee to assign Delegate.

COMMITTEES.

All Committees, including committees to judge of Crops, of exhibits at Fair, and of the Arrangements for the Fair, are chosen by the Trustees at their June meeting.

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TRANSACTIONS

FOR THE YEAR 1894

OF THE

ESSEX AGRICULTURAL SOCIETY

(*ORGANIZED 1818.*)

FOR THE

COUNTY OF ESSEX,

IN MASSACHUSETTS,

AND ITS

SEVENTY-FIRST ANNUAL ADDRESS

BY

HON. WILLIAM S. KNOX,

OF LAWRENCE.

With the Premium List for 1895.

PUBLISHED BY ORDER OF THE SOCIETY.

SALEM, MASS.:
OBSERVER BOOK AND JOB PRINT,
1894.

ADDRESS.

"*A Diversified Industry Most Favorable to Freedom and Progress.*"

The annual gatherings of the Essex Agricultural Society are not alone exhibitions of the season's increase and of the progress of agriculture in Essex County, but are as well commemorative of a historic past, and invite contemplation of the annals and characteristics of a free and progressive people. As exhibitions they display not only the fruit of the soil but also the fruit of the loom, the product of the workshop and the handiwork of the mechanic. As the varied industries of our county are thus brought to view, and the history of her people recalled, the mind is led naturally to the theme of this address, that "A diversified industry is most favorable to freedom and progress."

Agriculture and fishing were of necessity the earliest occupations of the colonists, and after two hundred and fifty years these remain permanent and prosperous industries. But the history of Essex County was not to be that of an agricultural and fishing community alone, the instincts and genius of a great commercial people were possessed by the colonists in Essex, those qualities which embodied in men, make nations in place of provinces, and which ever in the world's history have arrayed their possessors upon the side of liberty and progress, and made them the natural enemies of tyranny and decay. The uncompromising attributes of the Puritan were supplemented here by that many-sided-ness of character possessed by the

Ionic race who settled on the shores of Greece, and dwelt by the mouths of its rivers.

Previous to the Revolution, the ships of Salem, of Newburyport, of Beverly and of Marblehead were seen on all waters, and under the most adverse conditions and oppressive restrictions, a profitable and extensive commerce was established, and, these conditions and restrictions removed by the achievement of independence, that commerce assumed grander proportions, and no seaport was better known than Salem, and her ships carried the new ensign of freedom and power wherever there was hope of trade and profit. The spirit of the independent American farmer, gathering his annual return from the soil, existed side by side with that of the lordly Venetian who would exact his tribute from all the world.

Seargent S. Prentiss, in his address before the New England Society of New Orleans in 1845, said: "It is upon the unstable element the sons of New England have achieved their greatest triumphs." But neither agriculture nor commerce could satisfy that mounting desire for material advance, which had here found lodgment. Manufactures were early established against the most adverse conditions of all. Discouraged by the home government, hampered by restrictive laws, and unjustly taxed, they gained their foothold which has never been lost. Leather and shoes and hats and carriages and workings in wood and iron from the earlier days, and later with the advent of the power loom, the waters of her streams were made to join the soil to nourish and enrich the inhabitants of Essex, and to-day along the northern boundary of our county flows the most noted river devoted to manufactures in the world. Side by side with the development of agriculture have grown all the varied industries which apart from natural resources, produce the wealth of a nation. For no one of these did Essex County possess any peculiar advantage or fitness distinct from other sections of the country. No mines of useful or precious metals

here existed. No happy chance of geographical situation has built here a great city teeming with the wealth of a vast distributing centre. The farms, the homes, the mills, the shops and the banks largely belong to the people of the county. In all the past there has been no unnatural or stimulated growth. The credit of the State has never been pledged to provide means for our development, as had been the case with Mississippi but a few years before Seargent S. Prentiss made the address referred to. A policy which had lifted that young state to the highest pinnacle of financial grandeur, when to have been a Mississippian was better than a Roman "in that elder day." But all these glories faded in a night, and nowhere was poverty more abject or long continued. But there have been no sources of prosperity in Essex, other than the men who have lived here and the laws which have prevailed here. The colonists were filled with the desire for economic freedom, which was accentuated by the successful foundation of religious and political freedom. To this desire had been added the hard lesson of experience which they had learned as subjects of a foreign nation, whose colonial laws were oppressive and exacting in the last degree; the cardinal principles of which were that all the trade of the colonies was the exclusive possession of that nation, and all their products could only be distributed as it should direct, and that all that was received in return for such products must come from or through the mother country, and be such as it should direct, and that this arbitrary control extended both to the external and internal commerce of the colonies. It was seen that a varied industry was essential to the creation of wealth. The belief of the men of Essex was well expressed by John C. Calhoun, in language used by that eminent statesman before the South had been outstripped by the North in manufactures. "Neither agriculture, manufactures nor commerce taken separately, is the cause of wealth, it flows from the three combined, and cannot exist without each. The wealth of

any single nation or any individual, it is true, may not immediately depend on the three, but such wealth always presupposes their existence. Without commerce industry would have no stimulus, without manufactures it would be without the means of production, and without agriculture neither of the others can subsist. When separated entirely and permanently they perish."

It was seen as well that commerce and manufactures cannot flourish by the side of agriculture without commercial and industrial independence. A people politically free may be industrially and commercially enslaved, as the existing conditions of many nations to-day make plain. These lessons were in accord with the enterprising and commercial bent of the inhabitants of Essex, and they entered with enthusiasm into the spirit of the laws for the protection and encouragement of manufactures, enacted soon after the Revolution. This disposition led them to take the true view of such statutes as were passed in this new country and of the common law as it was introduced, both as to their scope and nationality, and also their authority and sanction. They saw that the laws for a nation of agriculturists, merchants and manufacturers must be uniform and coextensive with the bounds of the nation, and that there must be as well an authoritative interpretation of those laws respected and obeyed by all. In no other way could the multiplex transactions of a mercantile community be carried on. A purely agricultural people could perhaps prosperously exist side by side with other independent like communities, with differing laws or different interpretations of the same laws, but not so with a trading and manufacturing people; they are concerned not alone with production and consumption, but they produce to sell and exchange, they seek a market. The inviolability of contracts, the safety of personal property in transportation, the collection of debts must all be secure in law, and above all social order and personal freedom. There must then be some tribunal whose decisions shall be

final. If the constitution and laws of the nation could be constructed in one way in one state, and have an entirely different construction in another, if the legislative, judicial and executive departments of the government could each give them an independent and authoritative interpretation, then must a mercantile and manufacturing people under such a constitution and laws be poor indeed. The people of Essex, together with those of New England generally, maintained that the United States Supreme Court was such a tribunal, and that its decisions as precedents made the law. An entirely different claim was soon put forward by a portion of the people devoted to the single avocation of agriculture, that the decisions of the United States Supreme Court carried no more weight than their reasonableness and were binding neither upon the different states or the different departments of the United States. These divergent views existed side by side in warring companionship till finally settled by the War of the Rebellion. Settled in accordance with the views early entertained by the people of Essex and New England, settled in the only way that made liberty established by law possible in this country. Thus did the commercial spirit in Essex County, and the desire to establish a varied industry here, place her people upon the side of freedom and conquering progress.

The love of social order and domestic peace likewise grew naturally from the commitment of the people to varied pursuits. These were essential conditions to their successful prosecution. Frequent changes in government revolutions and social upheavals are dreaded by men of affairs. The merchant stakes his enterprises upon his judgment of the future. It often takes years of effort and experiment and the use of large amounts of capital to establish a successful manufacturing industry. Commercial changes and financial disturbances are always to be expected. When to these are added want of confidence in the permanence of the form of government and in the

stability of law, enterprise is next to impossible. Such enterprise is unsuited either to a fickle people or a people chained to a single industry that is largely dependent upon natural conditions of soil or climate or location. The merchant and manufacturer must largely create the conditions of their success. The existence of a class of citizens devoted to law and order and tranquillity, perhaps, was not of so much importance in the earlier days of the republic, when the population was sparse and homogeneous, but when that population has become more dense, and made up of different nationalities, a considerable portion of which is new to the theory and practical working of our government, when the spirit of unrest is abroad, and the disposition becomes manifest to bring about needed or fanciful reforms otherwise than under the forms of law, such a class of citizens becomes the reliance of established institutions and the enduring hope of liberty. They constitute a conservative element that is opposed to tearing down what we have in the hope of getting something better, that believes it is better to endure the ills we have than to open the door to those that are unknown. Devoted to liberty, they recognize that civilization has a pre-eminent claim to their support, and that the liberty of the anarchist or the commune is the most hateful form of oppression.

A manufacturing and commercial people have always been arrayed upon the side of freedom, from the time of the overthrow of the feudal system, through the growing power of cities, to the present day. Not freedom in the abstract, or as a dream of some impossible social organization, but freedom reduced to practice, and made effective through wise laws and a strong government, as forming the basis for material achievement and welfare, and the orderly development and growth of property and values. Such a people learn to prize the means by which freedom is applied and made effective to life and affairs as their chief possessions, and as men are moved by their material interests more strongly than by any other motive, law and

a strong government have in such a people sure supporters. But a people possessing a single source of wealth, which is founded upon some natural condition of soil or climate, or the possession of some privilege not shared by others, places the possession of that source of wealth as first: law, a strong government, and freedom itself are but secondary. The possession of a soil adapted to the raising of cotton and the legal right to own laborers were the bases of southern prosperity. For them the southern people were ready to overthrow the organic law of the land as embodied in the constitution, as well as the national government itself.

As the conditions of prosperity in Essex depended not upon natural advantages, but upon the mental and moral attributes of the people, and as success was won at the price of constant struggle and the practice of small economies, there grew up here a race of shrewd, practical and far-seeing men, jealous of every right they possessed, and holding with a strong hand every foot of vantage ground acquired. Depending neither upon the wind or the clouds, or the richness of the soil, expecting to reap nowhere except as they had sown, they were self-reliant to the last degree.

Without capital at the beginning, acquiring it slowly and painfully, when acquired, they fully appreciated its power and value. Such a people were rich, strong soil in which to plant the seeds of liberty and sound government. Political heresies and financial vagaries could gain no foothold with them. No shadow could take the place of substance. They could not be made to believe that wealth could be created by law ; they would reject with scorn the symbol of value, though stamped with the seal of a nation, which did not have behind it the intrinsic value into which it could be converted. Engaged in a constant effort to create value, to make profit in commercial transactions, and to put aside some savings from the product of the farm, they clearly saw that if that value and profit and

saving were to be counted at last by a standard that was itself varying and unstable, the work of their hands could never be established.

The owners of vast cotton fields and exhaustless mines, enslavers of labor and the possessors of privilege and monopoly, may look with unconcern upon the character of the standard which measures their returns, the margin of profit is so large. That which comes from the prodigality of nature, or the sweat of other men's brows, is so easily acquired that depreciation in the standard of its value is hardly considered, but when every dollar acquired is coined from human effort of hand or brain, it should be the world's best dollar, absolute and changeless. How well the people of Essex County and of New England understood the financial problems confronting a new country, the history of the past has clearly shown. How able and apt they were in solving them is no less clear. How faithfully they have adhered to the one underlying principle of soundness of the currency, every student of the past knows. The importance to a free nation of a people with the traditions upon financial questions of those of Essex County can hardly be exaggerated. To the permanence and advancement of such a nation industrial and financial independence are as essential as political independence. A nation whose currency is debased or unsound must always occupy an inferior position. Its people are at the mercy of others in their exchanges. The wealth of India or Mexico cannot make such a people great. Revolutions and declarations of independence cannot make them free. They are bound in the chains of a servitude hopeless to break. Progress is impossible. Pride and patriotism are crushed, finally their revenues are turned over to some creditor nation, and their country becomes a province.

To the establishment of varied industries in a new country, and the creation of the conditions which make them successful, the growth of a free and intelligent population about them is essential. To the merchant and manu-

facturer a market is the great requirement, the last stage in the process, the final field where the harvest is to be garnered. The more free and intelligent the people, the more even the distribution of wealth, the greater consumers will that people be, and the better market they will furnish. Especially for new manufactures must the market be the home market. Wealth and education, civilization and culture, become not alone the desire and aspiration of a people engaged in varied pursuits, but also their highest material interest. The character of the people flows naturally from their occupations.

The changeless laws of trade, of supply and demand, work harmoniously with the inevitable laws of progress and development in a people engaged in constant rivalry and struggle to better their condition, when the rivalry and struggle are free for all, and the conditions upon which all may enter into them are equal.

The invitation to immigration to such a Colony is to the intelligent, the industrious and ambitious. Wherever man is waging an unequal contest with power and privilege to reach a higher plane of existence, and wherever the hope of a new life and a better day has not been utterly crushed in his heart, there that invitation comes freighted with promise and radiant with the light of a new dawn. It is a magic voice that invites to equal rights and equal opportunities, that tells of the open door to every avocation in which man's industry can be profitably employed. It speaks to those who seek not a temporary change, a mere season of adventure and experiment to be followed by return to old surroundings, but a permanent change and an enduring lot in life, entirely freed from the thrall of old conditions; to those by whom old forms and old wrongs have been endured till they have become hated; to those who have no reverence for the past because it is the past, and are eager to embrace a future of promise; to those to whom country and native land have given nothing but a birth place, and denied them

the right of freedom and equality, who have no old love of country to forget in order to be on with the new, and whose hearts are virgin soil in which to plant the seeds of patriotism. The invitation went to the peaceful and gentle in all lands. The prizes in the new country were to be won through the arts of peace. Force and fear and injustice were to take no part in the contest. It was unheard by the violent and adventurous, the bold and unscrupulous, the restless and daring, those who often in the world's history have been pioneers in the peopling of new territory, and have often laid the foundations of great empires and even the highest civilization through blood and rapine and lawlessness. But a people engaged in establishing manufactures and agriculture and commerce, on a hard soil, in a trying climate and on a rugged coast, had no attractions for them, there was nothing to conquer, nothing to seize. They might flock to the diamond fields, or the gold and silver territory, or join the filibuster or buccaneer, to make their own some rich but weak and ignorant kingdom, but in Essex there was nothing to be found but the right of one man to labor in his chosen avocation, side by side with another and with no human law governing them but that of their own making. A poor conquest indeed, but to those who possessed it priceless beyond purchase.

Those who came to Essex attracted by her varied industries, laid the foundations of liberty in peace, and of law in the necessities of a peaceful and industrious people. Judge Lynch never held court in our borders, no vigilance committee was ever called upon to repress violence, preserve social order and administer the criminal law. The code of honor was never recognized, and the duello has performed no office in settling disputes. Generally in new settlements irresponsible force, without beginning or end except in men's caprice, has been the means of preserving any sort of order or social existence, and there has been a rude and summary administration of justice which

could command no respect and was effective only as it was feared; and it is from these sources that, as civilization has advanced in such settlements, law and the administration of justice in their proper source and scope have been evolved. But the early history of such settlements is apt to produce a more lasting impression upon the character of the people.

When the traditions of a people and the sources of their law rest upon violence and the popular temper, they the more readily turn to those means again in times of popular excitement, and have less hesitancy in accepting them as the means of redress for grievances. It is but a few years ago that the vigilance committee of California was temporarily reorganized, and under its old time leader gave battle once and for all to the misguided followers of the demagogue of the sand lots. But to men who come to a new settlement, as men came to Essex, seeking only a field wherein they might exercise the arts of peace, and who sought no property or aggrandizement except as the result of labor, and who from the very beginning entertained correct views of the source of law and the exercise of authority, irresponsible force was abhorrent. They could never tolerate the rough and fitful administration of justice that even in our own country has characterized the communities that have located around the great mines and on the grazing fields. Such traditions and characteristics have left their permanent impress, and to the people of Essex County it is almost inconceivable that there should be an armed force exercising any power whatever, except as that power was derived from the legally appointed executive, and acting under the law of the land. Such a people would endure many evils, and suffer the loss of many cherished possessions, before they would think as a means of relief, of surrounding the polls upon election day with a body of armed men to intimidate voters. They would withdraw in disgust from the political gathering where the speakers were surrounded by men displaying

weapons and challenges to combat were bandied between rival candidates. Among such a people the one who appeals to force, no matter under what guise, or who even suggests any remedies for real or fancied wrongs which are not to be brought about under the forms of law and established government, is no less a malefactor than the burglar or the foot-pad. These popular characteristics of the men who early peopled Essex County, which characteristics in turn owed their existence to the fact that it was sought to establish here a varied industry, and to lay the foundations of prosperity in agriculture and commerce; these traditions of government which were here wrought out, and which have grown with time and permeated a whole history, and are more manifest to-day than ever before, make part of the firm bed-rock upon which is erected the temple of our liberties.

Often in the history of the world has liberty and a free government been lost through some sudden uprising, some disregard of lawful method of proceeding, some passionate appeal to citizens to take into their own hands, laws which seem slow in operation or unjust in their results. The mob is often the creation of an instant, but in that instant it is likely to destroy what has cost years of the sacrifice and devotion of a people to build up, and this result is often independent of its own fate. If it is successful, if it tears down and uproots, if it gains control of power, it becomes itself the most hateful tyranny, and after a brief career yields up its power to the unscrupulous and designing few. If it fails, if it is put down and trampled under, the dangers which its existence has threatened, the possibility that it could have been called into existence, the fear of like occasion in the future, suggest and often result in the enactment of stringent laws before unthought of. Rights which are dear, and of the essence of liberty are taken away or abridged, the right of free speech is curtailed, the right of men to peacefully assemble for discussion and council is denied and a hateful system of espionage weak-

ens the utterances of a free press, and liberty, if not slain, becomes but a poor and wounded semblance of its former self.

The surpassing danger to a free government of all examples or suggestions of internal violence, both reason and the history of the past make manifest. The abiding strength to such a government of a people free and peaceful and law abiding, by tradition and practice, engaged in pushing side by side to their utmost development, agriculture, manufactures and commerce, and possessing and asking for no conditions of success but freedom and law and government, cannot be overestimated. In the activities of such a people, intelligence becomes a controlling factor. The ignorant farmer in Essex County with his limited acres and reluctant soil, would be in sad plight in life. The latest improvements in the machinery of the farm must be his, he must be familiar with the latest thought in agricultural science. The bonanza farmer of the West, with boundless area and prodigal soil, looks for success to conditions which are of chance. The drouth and wet, the hot winds and the cyclone, he can neither make nor unmake, and hardly modify. To speak of an ignorant manufacturer is a contradiction in terms. Invention follows invention in ceaseless advance. The machine used to-day, must be discarded to-morrow, or its owner is left behind in the race. The changing market must be followed closely, the caprice of fashion must be caught almost by intuition, and in the sharp competition of the day, every detail of the process of manufacture must be understood and watched. The unlettered merchant to-day is not in the race. Laborious days and nights will not alone carry him forward. He must be familiar not alone with the great movements and currents in the business, but also in the political world. This intelligence must be not of the few, but of the many, not of a class, but of all classes. The subalterns must be well equipped mentally as well as the leaders, or success will be lacking. The more free and in-

telligent the farm laborer, the better for the farmer and the farm. The educated laborer best serves the manufacturer, and the well informed clerk is sought by the merchant. The intelligence of such a community is of the practical kind, it is knowledge applied to affairs, education made powerful to forward material progress. To the miner, the ranger of the grazing country or the laborer on the cotton and sugar plantation, education is of but little interest as a means of advancement in his occupation. It is sought, if sought at all, as a means of escape from his condition, rather than improvement in it. His mental qualifications are of no consequence to the owner of the mine or field wherein he toils.

The drafts for such laborers, when made from foreign countries, are often from the ranks of the idle, the vicious and the hopeless, often, indeed, of the desperate and criminal. Government and law they have never known, except as words signifying oppression, to which they are in sworn and banded enmity, and for the overthrow of which opportunities are eagerly sought. To them property is robbery, and the destruction of social order the first step in their own enfranchisement. But to the occupations of a varied industry, which depend for their success upon the cultured brain and deft hand, knowledge like liberty and law is not only desirable, but essential. Technical education is of the very essence of their prosperity. But this education is not necessarily narrow and restricted to detail. It reaches out in its comprehension to the principles which underlie a great industrial, commercial and agricultural prosperity, and perceives with clear vision the foundation upon which the superstructure of progress has been erected. It sees that these principles and this foundation are the laws of a free and strong government, upheld by a people who know and love them. From this perception the flower of patriotism springs as naturally as the flower of the field from its natural soil. This practical education, springing from the avocations of a people, adds in-

calculable strength to free institutions. With the vast growth of population and a ballot possessed by all, education is the solution of many of the doubtful questions which are now rapidly rising upon the future horizon; indeed, to many thinking men, it is their only solution. Not the education of the philosopher, the theorist and the dreamer, but that of practical men of affairs, who understand how to work effectively, and to apply acquired knowledge to produce results, and who seek to know for the benefits that may come to them from the knowledge. With a people that have settled a country possessing some surpassing natural product or advantage, the division of classes is wide and permanent. The owners of the soil or their immediate agents dwell upon it but to gather in as rapidly as possible the wealth it yields, which is generally sufficiently great to be spent elsewhere in the more luxurious quarters of the world. It is too early yet, perhaps, to talk of absentee landlordism in this country, but absentee ownership of the productive industry of a people is a bad thing for progress and uncongenial soil for freedom. If the owners permanently inhabit the land, it is some great city which has become affluent as the distributing centre for the country's product, or in mansion houses, or plantation halls which resemble the ducal seats of old.

Labor is vassalage not in name, perhaps, or in law, but in substance nevertheless, with the most hopeful right possessed, the right to go elsewhere. A single industry of overwhelming importance excludes other and ordinary occupations. The laborer, discontented with his lot, cannot seek other employment; his only resource is to abandon the locality. The population is constantly shifting, that portion which remains permanent is satisfied with mere existence or with provision for mere animal wants. If hope and ambition ever existed in their breasts, they have forever died out. The gulf between them and the next class above is too vast to be crossed. There are no gradations and intermediate steps in the social scale about them

by which to ascend. They see but two classes, themselves and the very rich and powerful. To them home is a camp to be broken if possible, to be endured as shelter if not. The idea of the independent New England home is but a dream of the fancy. Men seek homes where they love to stay and expect to pass their future. They build where it is well with them, where they believe there exists the best human advantages they shall attain. The daily life of such a people accentuates the idea of a sharp division of society into two classes, and the conviction settles upon them that accident of birth, with few exceptions, casts the lot of man. Just as of a people, whose early history was characterized by violence and a rude and arbitrary administration of justice, the traditions remain, modifying their views of the sources of law, and presenting force as a remedy for public ills, to be used without hesitancy and without dread, so of a people in whose history the dividing line between two great classes has been sharp and deep, after the conditions which created the division may have passed away, when the mine has given out, the richness of the soil become exhausted, or the boundless forests of virgin lumber have been cut down, when the ordinary industries of men have taken the place of former occupations, yet the traditions of the earlier day remain, making ever present in the thought of the people a separation of men into classes, and the existence of a barrier in social life, which, while not openly recognized, is tacitly acknowledged, and which equality of political rights cannot entirely obliterate. Generations must pass away in such communities before the idea that there are fixed class distinctions among men can be eradicated. The traditions of a landed aristocracy remain where labor has once been enslaved. The gold and silver, the iron and coal, the lumber and the cotton of this country, as perhaps could not be avoided in a new land, have made rather too prominent with us the idea and example of class distinction. It will be well for us that they both be somewhat modified in the

future. The great evil in a republic of the existence of any marked class distinction is the popular notion that the class of wealth and power was created in some way by law, and depends for the petpetuity of its privileges upon influencing legislation. There could be hardly any belief entertained by the citizens of a free country more threatening than that there is behind and before the ballot box a power which can nullify the popular will as there expressed. However false and groundless the belief may be, its existence is always a present danger as a constant source of unrest, and as furnishing a basis for the appeal of demagogues on all occasions. That there should exist in a free country any class distinctions sufficiently marked to invite and emphasize this belief, is a danger to liberty and a menace to strong government. As to such distinctions as exist in this country, it is not only desirable, but probable, that they will pass away with the causes which brought them into existence. The events and opportunities which have created some of the most powerful and distinct classes in this country, it may almost be said, will never occur again. Doubtless, if in the earlier years of the nation the great wealth possessed in the public domain had been comprehended, it would have been disposed of with a more chary hand, and under regulations that would have provided for the devotion of some portion of its returns to the common interest. Other nations have been wiser in this respect. But what has been done cannot be undone. Titles once vested cannot be disturbed. Some evils that have resulted from the course pursued must be endured until time shall mitigate, if not cure their effects.

But with a people engaged in a varied industry, whose only wealth comes from the pursuit of the ordinary avocations which are open to all men everywhere, who have received no peculiar gift from nature and asked no advantage from men, or government, class distinctions, if they exist at all, are in their least marked and offensive form. The lines of demarcation are thin and shadowy. The

steps of ascent and descent from one to the other are of easy gradation, they mingle as they join. It is certain that the divisions are not in their nature permanent. There is no gulf that may not be crossed. The divisions are unmarked by the possession by some of a great source of wealth, hopeless of attainment by others. Wealth and luxury if enjoyed by any, have been reached through individual activity or enterprise, far reaching foresight, and years of toil and thrift and self-denial. No one can challenge them as seized and appropriated from what was a common heritage, or as founded upon a denial of that equality of rights and privileges which far exceeds in value any wealth of nature. Their possession does not incite the jealousy and enmity of the many, nor are the advantages which it confers conceded with that sullen acquiescence that marks submission to a wrong. It rather serves as a stimulus to endeavor for all, as a shining goal for which the contest is a fair and generous rivalry. The pathway which has led to it is plain to all. It is natural to humanity to yield to men with willingness and admiration what has been won through superior qualifications, or has come to them through good fortune, or as an inheritance from the past: and if as a result, there comes in time a class in society separated from another with some sharpness of distinction, such a class is not an element of danger in a republic, but of strength and cohesion. It is an ever present argument against unrest and turbulence, for it holds always in its hands the rewards of peace and gentle ways. It has never denied any man's justice or right, and looks all other classes in the face fearlessly and speaks only words of encouragement. Its members have made the wealth they enjoy and know its value, or it has come to them from ancestors who so made it, and who have left with their legacies the lesson of thrift and economy. They are guiltless of the offence of lavish and vulgar expenditure. Orders of nobility and titled husbands for their daughters they rarely purchase. Ostentation and display

are avoided, and republican simplicity lives and flourishes in the locality of its birth.

If there is a class which more than another may be said to result from a diversified industry and the pursuit by a people of the ordinary avocations of men, it is a great middle class, powerful in numbers and intelligence, conservative of every acquirement and lesson of the past, progressive towards every reasonable promise of the future, wedded to freedom and a strong government, chained to the rock of sound morals and sound money, believing in the right of property as one of the dearest rights of man, frowning upon all schools and 'isms which would deny that right in its simplicity and entirety, and loving peace and hating violence. This class, in other days and in other nations, has fought the battle of freedom against priest and king, and its name is equally hated by the tyrant and the anarchist. In a republic it stands arrayed against the encroachments of an oligarchy and the destructive rule of the unreasoning mob. Intelligent in a high degree, the sophistries of the socialist and the dreamer and the arguments of the subtile and designing are alike put aside with derision. This large and conservative class have their stake in this country. Their property and enterprises are here. Their investments are, generally speaking, home investments, and while the class of immense wealth and power may for a portion of the year have a home in one part of the country, and for another in another part, and for yet another in a foreign land, the members of this class usually have one home, they usually own it, about it centres their love and affection, and from it springs the attachment to locality which is the germ of patriotism. Such local ties of interest and sentiment tinge and guide, if they do not control their life and thought, both moral and political, and in days of some unrest in the republic, when all sorts of ready-made panaceas for social ills are put forward, and varied and variegated 'isms are presented as rallying cries, about which it is hoped men may be organized

there is one 'ism to which this middle class of ours is indissolubly joined, which they sturdily support, and on all occasions advocate, and that is Americanism. They do not consider it of much moment whether our domestic policy meet with the approval or disapproval of other nations, and they hold that our financial and economic interests shall be governed by conditions which prevail in this country, and not by those which prevail in any other country whatever, no matter how old, how rich or how powerful such country may be. They look with some suspicion upon the kindly interest that certain nations take in our affairs, and the fear they manifest lest we make mistakes, and by an independent American policy shut ourselves out of association with the brotherhood of the strong foreign nations.

Through all this generous interest and anxious fear they see the Lion of Old England, the Tri-Color of France and the Double Eagles of Germany, and they know that, figuratively speaking, these nations are abroad seeking whom they may devour, and how best they may break down the barriers that preserve to some more weak and foolish nation its own commercial and industrial independence. The victories of the strong nations of the earth in acquiring power and aggrandizement have been won quite as frequently by protection and guardianship of the weaker as on fields of battle, and the destruction thus wrought is more hopeless of repair than the devastation of years of exhausting war. The destruction of the productive wealth and energy of India is a sadder sight than pillaged fields and burnt cities. The former, humanly speaking, can never be restored. No brighter destiny for this country could be hoped for, than that it should be wrought out uncontrolled by foreign influences, and carved in accord with no old models, but from such ideals of government and law and society and business as have ever prevailed in Essex County, and which have sprung naturally from the character of its citizens and the pursuits and avocations of

their lives. The positive element of strength to a republic from a great middle class is supplemented by a negative influence hardly less weighty and beneficial. For, however large in numbers or powerful in wealth and culture such a class may be, it does not furnish those object lessons of inordinate wealth and power which serve for illustrations in the picture of injustice and oppression drawn by the radical reformer and professional agitator. They will never be designated by the demagogue as robber kings, or barons or lords. The men of many millions, which have been acquired in but a small portion of a lifetime, are dangerous examples to hold up before unreasoning multitudes. Wise and loyal men may discern and acknowledge that such examples are but excrescences upon our social and political polity; that they arise not from our laws and institutions, but exist in spite of them; the entirely exceptional events which have created them may be clearly demonstrated; the rank dishonor and plunder and violation of law upon which many of them rest, may be clear to the thoughtful and observing; but notwithstanding all that, they furnish a dangerous weapon for designing men and a very torch for misguided enthusiasts and dreamers. But neither in the sum of wealth and luxury enjoyed, the methods of their acquirement, nor the manners and habits of their possessors, will this great class ever be pointed at by the fair-minded, hardly, indeed, by the unreasoning and vicious, as a reproach to our liberties.

There are degrees of position in this middle class of ours, from the possessor of entire independence and leisure to the owner of the humble home and moderate depositor in the savings bank. And this wide range in the social positions of its representatives makes it influential in numbers, as well as in character. The most exalted patriotism and enlightened public spirit, possessed by but few, can produce little in the way of practical results in a republic, but with numbers it is quite the reverse. To the four millions of depositors in savings banks in the northern and

manufacturing states we can add the men who own their own homes, and we have a multitude whom no man can number, permanently arrayed in support of freedom and established government. They can make their influence felt not alone by precept and example, but by practical manifestation at the ballot box, and sometimes, when occasion may demand, by meeting unlawful force with force in a most wholesome and exemplary manner.

Liberty and a free government have owed much in the past to the middle classes, and the present outlook is that they will owe more in the future. There is also a negative influence for good springing directly from such various industries and avocations as are pursued in Essex county. They are in their nature unfavorable to the establishment of trusts and monopolies, which are also object lessons used by the disturbers of public repose and enemies of social order, and which in some of their manifestations are feared by the wise and thoughtful, as opposed to the spirit of our institutions, and calculated to alienate the government and its laws from the affection of the people. While many trusts have undoubtedly cheapened certain articles of necessary consumption, others have become oppressive and are objects of popular hatred. Their chief danger to the country is that the field of their contests is apt to be transferred from the commercial to the political arena. Triumphing over the operation of the ordinary laws of business, absorbing or crushing all rivals, they encounter the hostility of the masses. This hostility is manifested in political effort for their overthrow. It must be met in the field in which it is offered. It cannot be met by equality in numbers or put down in open discussion, and bribery and corruption become weapons of defence. It is quite likely that the venal influence of powerful combinations upon legislation and the judiciary is exaggerated in the popular mind, and is made the most of by politicians, but that it should exist in any degree, that it should be a subject even of discussion, can only be productive of evil to

our dearest rights and blessings. There is also abroad the belief that in some way these powerful aggregations manage to evade the laws which are made for their suppression. The disposition of prosecutors and judges to enforce them is distrusted, and respect for law and absolute confidence in its impartial enforcement is weakened. But such respect and confidence are the very essence of our freedom and essential to its preservation.

There are no inducements to trusts in the industries of the people of Essex. A trust in Essex County farms could not be dreamed of, and a trust in making cotton and woollen cloth, and boots and shoes and machinery is hardly less chimerical. Trusts in some articles of common manufacture have been attempted, but they have generally been short lived, and their wreck has been sufficiently disastrous to prevent their repetition. The control of the natural source of supply of some article of common necessity or utility seems to lie at the foundation of a successful trust. We have no such source in Essex. Our industries are founded upon the product of no source that can be controlled by combination, and only upon such product as has been bought and sold in the open markets everywhere and always. We work upon the world's raw materials, those upon which man's labor has been expended through all the past, and always will be while time and labor shall endure, and food and raiment and shelter be the first necessaries of human existence. In so working statistics show that no excessive profits have been made by manufacturers of Essex County and New England, and the wealth per capita exceeds that of other portions of the country. There has been no dependence in the past upon legislation for the industries which exist here. The people of Essex have asked for the passage of no laws which were not national in their scope and effect, and in theory, at least, of equal benefit to all, and no subsidy or public bounty has added to our wealth. These conditions are fit surroundings for the abode of freedom, in its simplicity

and its strength, for justice, in its pure decrees and inexorable execution. They point with unerring finger to a progressive past, and invite the gaze to a like progressive future.

The prosperous industries which have been established here side by side with the farm, have served in a degree to keep at home the enterprising and ambitious sons of Essex. While in that great tide of emigration of the best brain and sinew of New England, which has gone forth to people the west, Essex County has furnished her quota, it has not been in such proportions as in other sections. The field of manufacture has been almost as inviting in its newness and promise of reward as the great possibilities in a new state or unsettled territory, and the eager and aspiring farmer's son has emigrated to the workshop and the counting room and the warehouse, in preference to joining the westward moving throng. While these great drafts have been made upon the east to settled vast areas of new country, the small county in New Hampshire or Maine or in some portions of Massachusetts, devoted entirely to agriculture, may have lost in population, and now show evidences of hastening decay. No such signs are visible here. There are no abandoned farms in Essex county, as may be easily ascertained by a person desiring to invest in one. The growth of the industrial centres have furnished the farmer with a near market for his product and added to the value which his land possessed for agricultural purposes, a value for building sites, and for public possession as breathing places for a dense population. And now that the glow and gloss is somewhat off of western enterprise, and the first approach of a returning wave of population and investment to the east can be discerned, it is our privilege to know that Essex county is already far advanced in all that a new era of prosperity will accomplish, and takes her position in the march of progress well to the front of the procession. It is a part of the benefits of our diversified industry that we have had none of those periods of

wonderful development, speculation and profit that have characterized some portions of the country, and have thereby escaped the terrible reactions of prostration and loss that have followed in their wake. The traveller today through parts of the country may see new villages and projected cities deserted, palatial hotels, gorgeous opera houses and massive warehouses standing silent and tenantless, mere wreckage upon the commercial sea, telling where the hopes of individuals and communities have gone down.

Wherever men have sought to accomplish in a day the work of generations, inevitable failure has been the result. The cities, the counties, the states where these lamentable failures occur often become hotbeds where spring up all sorts of political heresies and noxious financial theories. Railings against existing laws and established government are indulged in, and threats of violent remedies are uttered by bombastic local officials. All this is foreign to our history. Boom towns and deserted villages have been rarer in Essex than abandoned farms. And disappointment and disaster as foundations for political belief and activities we have never known. Thus do our present conditions and past history furnish fit surroundings for the abode both of freedom and her chosen and inseparable companion, progress. Thus through a varied industry and ordinary and peaceful pursuits has civilization kept on its unswerving march. The sturdiness of character, the thrift and patience of the Essex farmer, have here been supplemented by the boldness and enterprise of the merchant and manufacturer; together they have permeated the whole body of our citizenship, producing a resultant of public character to which the anchor of our liberties may hold sure and steadfast, and upon which the structure of our progress may be erected as upon a rock. It is a part of the hope and promise of the future that the important questions remaining to be settled in this country are industrial and practical. The day of sensationalism in

American politics is of the past. Liberty in the abstract, free government as an ideal, are of the earlier times in this land, when religious and political freedom were what was sought. And now that these have been established, never more to be disturbed or questioned, liberty and free government as related to affairs and the material conditions and welfare of men absorb the attention of the thoughtful and patriotic. Liberty as equality of opportunity for all, free government as bestowing an absolute guaranty that the fruit of human endeavor shall be securely held and enjoyed, are to be the ultimate beneficence. For the solution of these questions what force so powerful and wise in the republic as a body of men of tried patriotism, accustomed to look at questions in their practical bearing, giving experience the larger place in all decisions, and theory the smaller, trained in business, who have learned in counting room and workshop those fine and delicate elements of detail that enter into the adjustment of the complicated relations of capital and labor, who are not to be hurried along in any drift of popular excitement, but stand ever poised in intelligence and discipline. To this force Essex furnishes with pride her quota. She is sure of them in all times of trial to freedom and sound government. Their character and qualifications are not the flower of a day, but the choice growth of generations of culture. They are both the root and offspring of liberty, the ripe harvest product of a long past of honest work in the ordinary and peaceful avocations of men.

SEVENTY-FOURTH

Annual Cattle Show and Fair.

The Cattle Show and Fair of this Society opened Tuesday, Sept. 18, 1894, at Haverhill, under favorable circumstances for a successful fair, with the exhibits largely in excess of last year, but Wednesday was dull, and by noon it began to rain, and before night and through the night there was a perfect downpour, and it did not clear until late Thursday forenoon, so that a large number of people were kept at home on account of the weather. The Superintendent of Grounds and his assistants worked hard in the pouring rain to get the live stock under shelter, and they found comfortable quarters for nearly all. In the exhibition hall the entries, as elsewhere, were largely in excess of last year, and the quality of the fruit and vegetables never was better, it being thought by some to be the finest display of fruit ever had in the county.

In the ploughing match, Thursday, there were fifteen entries, and an active competition took place, with most excellent results, though the weather being dull, there were not so many spectators to witness the ploughing as usual.

At 11 o'clock Thursday, the members of the Society assembled in the Centre church to listen to the annual address, delivered by Hon. William S. Knox of Lawrence, which was highly appreciated by all who heard it.

After the conclusion of the exercises in the church the annual dinner was served in Tanner's Hall, after which

President Appleton called the assemblage to order, and after introductory remarks, introduced Mayor Taylor of Haverhill, who welcomed the Society to Haverhill in behalf of the citizens, followed by Gen. William Cogswell, G. C. Rowley, Esq., Delegate from the State Board of Agriculture, and others, all of whom contributed to the occasion by interesting remarks.

The entries in the several departments of the Fair for 1894 and 1893 are tabulated for comparison, as follows:

STOCK, IMPLEMENTS, ETC., ON FREE SHOW GROUNDS.

Class.	Entries in 1894.	From Different Places in 1894.	Entries in 1893.	From Different Places in 1893.
Fat Cattle,	3	1	2	1
Bulls,	14	7	13	5
Milch Cows,	11	3	3	1
Herds of Milch Cows,	2	2	1	1
Heifers, Pure Bred,	11	2	9	4
Heifers, Native or Grade,	16	6	13	5
Working Oxen and Steers,	3	2	4	3
Steers,	3	1	8	3
Stallions, Farm and Draft,	1	1	3	3
Stallions, for Driving Purposes,	7	7	7	4
Brood Mares, Farm and Draft,	1	1	0	0
Brood Mares, Driving Purposes,	1	1	18	6
Family Horses,	9	6	6	5
Gent's Driving Horses,	5	4	8	4
Farm Horses,	9	6	8	6
Pairs of Farm Horses, over 2500 lbs.,	11	8	2	2
Pairs of Farm Horses, less than 2500 lbs.,	8	3	2	2
Colts, Farm and Draft,	8	6	6	6
Colts, Driving Purposes,	26	10	14	8
Teams used on Farms,	6	4	3	3
Swine, Large Breeds,	28	7	15	4

Class.	Entries in 1894.	From Different Places in 1894.	Entries in 1893.	From Different Places in 1893.
Swine, Small Breeds,	3	1	8	3
Sheep,	10	4	4	2
Poultry,	165	13	95	15
Harrows for Trial,	2	2	4	2
Agricultural Implements,	20	8	24	9
Carriages,	3	2	4	1
Ploughing,	15	6	13	7
Total on Show Grounds,	401	20	297	25

EXHIBITS IN HALL.

Class.	Entries in 1894.	From Different Places in 1894.	Entries in 1893.	From Different Places in 1893.
Dairy,	30	8	5	3
Bread and Canned Fruits,	48	13	32	11
Honey,	3	3	2	2
Pears,	174	19	99	15
Apples,	354	19	86	15
Peaches, Grapes and Assorted Fruits,	112	18	62	11
Plants,	9	5	4	2
Flowers,	84	12	120	9
Vegetables,	326	17	240	14
Grain and Seed,	41	11	19	7
Counterpanes and Afghans,	71	12	42	7
Carpetings and Rugs,	35	7	19	6
Articles Manu'f'd from Leather,	14	4	18	3
Manufactures and General Mdse.,	5	3	12	8
Fancy Work,	213	16	140	11
Works of Art,	131	14	109	6
Work of Children under 12 years of age,	23	8	12	6
Grange Exhibit,	1	1	1	1
Total in Hall,	1674	27	1022	26

Grand total, 2075 entries from 29 out of 35 cities and towns in Essex County, against 1319 entries from 30 cities and towns last year. Essex, Gloucester, Manchester, Nahant, Saugus and Wenham did not have exhibits this year. The entries were: Amesbury, 71; Andover, 5; Beverly, 9; Boxford, 179; Bradford, 151; Danvers, 22; Hamilton, 5; Haverhill, 633; Georgetown, 33; Groveland, 95; Ipswich, 2; Lawrence, 82; Lynn, 61; Lynnfield, 2; Marblehead, 14; Methuen, 82; Merrimac, 29; Middleton, 9; Newbury, 115; Newburyport, 42; North Andover, 136; Peabody, 37; Rockport, 1; Rowley, 43; Salem, 19; Salisbury, 6; Swampscott, 1; Topsfield, 5; West Newbury, 186.

REPORT OF THE ANNUAL MEETING.

The annual meeting of the Society was held in Grand Army Hall, Haverhill, Wednesday, Sept. 19, 1894, and the following business was transacted:

President F. H. Appleton called the meeting to order at 10.30 A. M., and upon a motion it was voted that the chairman appoint a committee of three to receive, assort and count the votes for officers the coming year. Messrs. Evans of Salisbury, Bailey of West Newbury and Pettingill of Danvers were appointed.

Mr. S. W. Hopkinson of Bradford moved that the secretary be instructed to cast one ballot for Francis H. Appleton for president; J. J. H. Gregory, O. S. Butler, H. G. Herrick, Asa T. Newhall, for vice-presidents; John M. Danforth for secretary; Gilbert L. Streeter for treasurer; and it was so voted unanimously.

The secretary cast one ballot as above, and the officers were declared elected.

On motion of Mr. Butler of Georgetown, it was voted that the committee chosen by the trustees to see about getting plans, etc., for a permanent location for the Soci-

ety, now make their report. President Appleton, chairman of the committee, made a report that, according to estimates obtained by the committee, it would cost about $17,000 to purchase land, erect buildings, fence the grounds, grading, etc., and recommended that the Society locate in the town of Danvers, provided they could get land at a reasonable price.

At this time a series of resolutions were presented by a committee chosen at a meeting of the citizens of Danvers, asking the Society to locate in that town, and the citizens of Danvers had pledged themselves to give the Society one thousand dollars toward the same.

On motion of Mr. Butler of Georgetown, it was voted that a committee, consisting of the president, secretary, Sherman Nelson of Georgetown, James C. Poor of North Andover, Charles C. Blunt of Andover, E. A. Emerson of Haverhill, M. C. Pettingill of Danvers, Asa T. Newhall of Lynn, Richard Newell of West Newbury, Edward Kent of Newbury, and S. D. Hood of Topsfield, be chosen by this Society, with full power to bond or purchase, grade and fence land, and erect suitable buildings thereon for the use of this Society, and the Society hereby authorize the treasurer of the Society to pay for the same from the Society's funds, upon the approval of the bills by the president and secretary, unless the executive committee deem it unwise to disturb some of the invested securities, in which case they are hereby authorized by vote of this Society to borrow money and mortgage the property and issue notes for the same, provided that said committee shall not contract any bills exceeding the invested funds of the Society. Vote was 81 in affirmative, 11 in negative.

Voted, that the committee shall incur no expense to the Society beyond the funds of the Society, and establish no debt.

A vote of thanks was extended to the society for the use of the church, and to all others who had lent their assistance in making the fair a success.

Report of Committees.

1894.

FAT CATTLE.

The Committee on Fat Cattle have attended to their duties and respectfully report to the secretary that they have made the following awards:

$7. First premium, to James C. Poor, No. Andover, for pair fat oxen.

$5. First premium, to James C. Poor, No. Andover, for best fax ox.

E. G. Nason, A. P. Russell, Joshua H. Chandler—*Committee.*

BULLS.

The Committee on Bulls have attended to their duties, and respectfully report to the secretary that they have made the following awards:

$7. First premium, to Isaac C. Day, Boxford, for 3-year-old Ayrshire bull.

$7. First premium, to A. E. Towne, Georgetown, for 3-year-old Guernsey bull.

$7. First premium, to Robert Foss, Hamilton, for 3-year-old Jersey bull.

$7. First premium, to James C. Poor, No. Andover, for 3-year-old Holstein bull.

$5. First premium, to Horace Moody, West Newbury, for 1-year-old Jersey bull.

$5. First premium, to Cochickwick Farm, No. Andover, for Ayrshire bull, 11 months old, "Dago."

$5. First premium, to James C. Poor, No. Andover, for Holstein bull 6 mos. old.

$3. Second premium, to James C. Poor, No. Andover, for Holstein bull, 1 year old.

$5. Second premium, to C. K. Ordway & Son, West Newbury, for Holstein bull, 3 years old.

$3. Second premium, to M. H. Connor, West Newbury, for Ayrshire bull, 6 months old.

Shorthorn had but one entry, by Thomas Sanders of Haverhill, but the rules of the Society not being complied with, no premium was awarded.

The exhibition of bulls was small and not up to the standard of excellence which should be made by the farmers of our county. It would seem to be good policy for the Society to be liberal in its premiums on this class of stock, in order to induce and encourage larger exhibitions, and to show that good bulls are recognized as the prime factor in improving our dairy stock. It has become a well established fact that the sire is the great and paramount element in establishing any desired quality which we may wish in our herds. A farmer may buy a so-called thoroughbred bull, with a long pedigree, but whose get will be a disappointment to the breeder, for the reason that he was not well-bred, or from a strain of stock of the highest excellence, or perhaps lacking in vigor and energy to transmit the good qualities of his ancestors. A bull should not only have a pedigree, but be well-bred, and have strong points of merit and excellence of his own,

with a strong constitution and masculine energy capable of imparting those qualities to his get. With such an animal at the head of the herd, and by breeding only from cows of good milking strains, of robust and strong constitutions, the desired result will be attained. By this judicious breeding the farmer will soon build up a herd which will be a source of profit, and encourage him to improve and keep to its highest standard. It costs no more to rear a heifer which will be a deep milker or good butter cow than a scrub entirely lacking in any of these qualities. Grades are and no doubt will continue to be the stock for the common farmer, and every breeder should aim to obtain the highest standard of excellence in this class of stock. This can only be done by breeding from animals possessing in a marked degree the qualities desired.

As before remarked, a bull may be a thoroughbred, but not well-bred, for to be well-bred he must be descended from a line of ancestors noted for their good qualities and of vigor enough to transmit the same in a marked degree. A bull to be a good stock-getter should not have too feminine an appearance, as we have learned from breeding from such an animal with unsatisfactory results. As an illustration of the ground we have taken we would say that we have recently been breeding from a Guernsey bull which we considered a perfect type of what such an animal should be, as regards breeding, form and general characteristics, and as a result his get are fulfilling our highest expectations. We are in hopes to still further improve upon them by the judicious selection of a bull of a good milking strain, with energy enough to impart the same qualities to his get. By following this principle, and breeding from only our deepest milkers, we expect to build up a breed which will well repay us in profit and pleasure.

J. Otis Winkley, Chairman.

MILCH COWS.

The Committee on Milch Cows have attended to their duties, and respectfully report to the secretary that they have made the following awards:

$10. First premium, to James C. Poor, No. Andover, for best milch cow, either foreign, native or grade, Holstein, "Madame Eugeine."

$5. Second premium, to James C. Poor, No. Andover, for Holstein cow, "Myra W."

$8. First premium, to James C. Poor, No. Andover, for grade cow, "Avena," Holstein and Durham.

$4. Second premium, to James C. Poor, No. Andover, for grade cow, "Bessie B."

$8. First premium, to M. H. Connor, West Newbury, for Ayrshire cow.

$4. Second premium, to M. H. Connor, West Newbury, for Ayrshire cow.

John Swinerton, John S. Crosby, Arthur G. Whittier, Albert Emerson—*Committee.*

STATEMENT OF JAMES C. POOR.

To the Committee on Milch Cows:

I enter for your consideration for the best milch cows, either foreign, native or grade, the Holstein cows, "Madam Eugeine," 9 years old, calved March 8, 1894, is due Feb. 20, 1895; in the month of April she gave 1680 lbs. milk. And "Lady Shepard," 12 years old, calved Aug. 4, 1894; from Aug. 10th to Sept. 10th she has given 1450 lbs. milk.

For Holstein cows: "Myra W.," No. 10,359, H. F. H. B., 9 years old, calved May 31, 1894, not bred: milked in month of May, 1575 lbs. And "Betz 2d," No. 1770, H. F. H. B., 11 years old, calved Feb. 28, 1894; bred July 27; milked for the month of March, 1395 lbs.

For native or grade cows, 4 years old and upward, the grade Holstein and Durham 6 years old cow "Overna," calved April 20, not bred: did not go dry last season; gave 1530 lbs. milk in June. And the grade Holstein and Jersey cow "Bessie B.," 4 years old; calved April 4th, is due in April, 1895: from April 20 to May 20 she averaged 48 lbs. milk per day, or 1440 lbs. in 30 days.

The winter feed of these cows was four quarts gluten and corn meal and four quarts bran, with oat and corn fodder and some good hay; also one feed of roots or cabbage once a day: watered twice a day. Summer feed, pasture, with three quarts gluten meal. Since Aug. 1st have been fed oat or corn fodder night and morning.

Respectfully submitted,

JAS. C. POOR.

STATEMENT OF M. H. CONNOR.

To the Committee on Milch Cows:

I enter for premium for milch cows the Ayrshire cow "Fedalma 4th"; dropped her first calf Dec. 24, 1889, and dropped her last calf October, 1893, and due to calve Oct. 8, 1894. Feed in winter, English hay and fodder corn, with six quarts of gluten meal and shorts; in summer, common pasture.

"Brunette 3d," dropped first calf Jan. 7, 1890: last calf

March 28, 1893, and is due to calve again March 1st, 1895: feed same as above.

Respectfully submitted,

M. H. Connor.

HERDS OF MILCH COWS.

The Committee on Herds of Milch Cows have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$15. First premium to James C. Poor, No. Andover, for herd of six cows.

$10. Second premium to Thomas Sanders of Haverhill, for herd of six cows.

N. M. Quint, William Thornton, G. C. Martin—*Committee.*

HEIFERS—PURE BRED.

The Committee on Heifers, Pure Bred, have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$5. First premium, to James C. Poor, No. Andover, for Holstein heifer, "Princess," 2 years old.

$5. First premium, to James C. Poor, No. Andover, for Holstein heifer, "Zalma 2d," 1 year old.

$3. Second premium, to C. K. Ordway & Son, West Newbury, for Holstein heifer, "Jessie A.," 2 years old.

$3. Second premium, to C. K. Ordway & Son, West Newbury, for Holstein heifer, "Rosanna O.," 1 year old.

$5. First premium, to J. D. W. French, No. Andover, for Ayrshire heifer, "Nellie Day, 2d," two years old.

$5. First premium, to J. D. W. French, No. Andover, for Ayrshire heifer, "Rose Bay, 2d," 1 year old.

$3. Second premium, to J. D. W. French, No. Andover, for Ayrshire heifer, "Rosary," two years old.

$3. Second premium, to M. H. Connor, West Newbury, for Ayrshire heifer, "Lady Essex," 11 months old.

Horace F. Longfellow, A. M. Robinson, S. M. Titcomb, J. R. Gordon—*Committee.*

HEIFERS—NATIVE OR GRADE.

The Committee on Heifers, Native or Grade, have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$7. First premium, to James C. Poor, No. Andover, for grade Holstein in milk, 2 years old.

$5. Second premium, to John F. Swapp, West Newbury, for grade Holstein heifer in milk, 2 years old.

$5. First premium, to Horace Moody, West Newbury, for grade Ayrshire, 2 years old.

$5. First premium, to Chas. W. Webster, Haverhill, for grade Holstein, 2 years old.

$3. Second premium, to James C. Poor, No. Andover, for grade Holstein, 1 year old.

$3. Second premium, to Horace Moody, West Newbury, for grade Ayrshire in milk, 2 years old.

S. F. Newman, H. A. Hayward, E. L. Wildes—*Committee.*

STATEMENT OF JAMES C. POOR.

To the Committee on Heifers, Native or Grade:

I enter for your consideration the two year old heifers, Minnie N., grade Holstein and Durham, calved Aug. 18. She is giving 13 qts. milk a day, and Jennie J., grade Holstein and Ayrshire, calved Sept. 5, is giving 14½ qts. milk a day. Feed, pasture, with 2 qts. gluten meal, and corn fodder morning and night.

Respectfully submitted,

JAS. C. POOR.

WORKING OXEN AND STEERS.

The Committee on Working Oxen and Steers have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$10. First premium, to C. K. Ordway & Son, West Newbury, for working oxen.

$8. First premium, to Horace Moody, West Newbury, for working steers.

Abel S. Harriman—*for the Committee.*

STEERS.

The Committee on Steers have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$7. First premium, to W. H. Poore, West Newbury, for 3 year old steers.

$6. First premium, to Horace Moody, West Newbury, for 2 year old steers.

$5. Second premium, to George Flook, West Newbury, for 3 year old steers.

Daniel A. Carlton, Geo. W. Chadwick, John A. Ellis—*Committee.*

TEAMS USED ON A FARM.

The Committee on Farm Teams have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$5. First premium, to W. E. Merrill, West Newbury, for 3 pair horses.

$3. Second premium, to Fred A. Russell, Methuen, for 2 pair horses.

$5. First premium, to C. K. Ordway & Son, West Newbury, for 2 pair oxen.

John W. Lovett, John T. Elliot, Charles Haseltine—*Committee.*

STALLIONS, FARM AND DRAFT.

The Committee on Stallions, Farm and Draft, have attended to their duty, and respectfully report to the secretary that they have made the following award:

$6. Second premium, to J. W. Carlisle, Ipswich, for Gray Percheron stallion.

H. G. Herrick, Peter Holt, jr., M. C. Andrews, Leverett Swan—*Committee.*

STALLIONS FOR DRIVING PURPOSES.

The Committee on Stallions for Driving Purposes, have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$10. Second premium, to L. K. Morse, Haverhill, for Chestnut stallion, "Pentucket," with five of his stock.

$6. Second premium, to L. K. Morse, Haverhill, for Chestnut stallion, 6 years old.

Peter Holt, jr., Edwin H. George, J. D. Drew, J. H. Perkins, O. S. Butler—*Committee.*

FAMILY HORSES.

The Committee on Family Horses have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$8. First premium, to John O'Connor, West Newbury, for gray gelding.

$6. Second premium, to John C. Day, Bradford, for bay mare, 5 years old.

$4. Third premium, to Morris S. Hill, Methuen, for black horse.

Francis H. Appleton, James O. Parker, W. E. Merrill, Benj. F. Eaton—*Committee.*

BROOD MARES,—FARM AND DRAFT.

The Committee on Brood Mares, for Farm and Draft Purposes, have attended to their duty, and respectfully report to the secretary that they have made the following award :

$10. First premium, to Charles C. Batchelder, Groveland.

Thomas Sanders—*for the Committee.*

GENTS' DRIVING HORSES.

The Committee on Gents' Driving Horses have attended to their duty, and report that it was the unanimous opinion of the committee that none of the horses exhibited were entitled to first premium.

The second premium was awarded to one horse, but not complying with the rules of the Society it was withheld.

Richard Newell, M. A. Plummer, W. H. Hayes, Byron G. Kimball, Fred H. Bates—*Committee.*

SINGLE FARM HORSES.

The Committee on Single Farm Horses, have attended to their duty and respectfully report to the secretary that they have made the following awards :

$8. First premium, to A. W. Butrick, Haverhill, for black horse, weight, 1125 lbs.

$8. First premium, to J. D. W. French, No. Andover, for bay mare, weight 1220 lbs.

$6. Second premium, to M. M. Jaques, Groveland for gray mare, weight 1000 lbs.

$6. Second premium, to James C. Poor, No. Andover, for gelding, 4 years old, weight 1300 lbs.

Wm. P. Bailey, E. C. Little, E. A. Emerson, E. A. Fuller, W. S. Phillips—*Committee.*

PAIRS OF FARM HORSES WEIGHING OVER 2500 LBS.

The Committee on Farm Horses over 2500 lbs., have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$8. First premium, to W. G. Webb, Haverhill, for pair of horses, weighing 2750 lbs.

$6. Second premium, to A. M. Robinson, No. Andover, for pair of horses, weighing 3000 lbs.

Isaac F. Knowlton, J. H. McKenney, R. T. Jaques, Samuel T. Poor—*Committee.*

PAIRS OF FARM HORSES WEIGHING LESS THAN 2500 LBS.

The Committee on Pairs of Farm Horses have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$8. First premium, to M. H. Connor, West Newbury, for pair gray horses, weight 2200 lbs.

$6. Second premium, to George C. Carr, West Newbury, for pair bay horses, weight 2400 lbs.

B. F. Barnes, C. K. Ordway, Wm. Merriman—*Committee.*

COLTS FOR FARM PURPOSES, THREE AND FOUR YEARS OLD.

The Committee on Colts for Farm Purposes, three and four years old, have attended to their duty, and respect

fully report to the secretary that they have made the following awards:

$7. First premium, to John C. Day, Bradford, for 4 year old colt.

$7. First premium, to Isaac C. Day, Boxford, for 3 year old colt.

$5. Second premium, to James C. Poor, No. Andover, for 3 year old colt.

$5. Second premium, to R. Jaques, Newbury, for 4 year old colt.

S. D. Hood, M. C. Pettingill, D. D. Adams, John H. George—*Committee.*

COLTS FOR FARM PURPOSES, ONE AND TWO YEARS OLD.

The Committee on Colts for Farm Purposes, one and two years old, have attended to their duty, and respectfully report to the secretary that they have made the following award:

$5. First premium, to S. F. Newman, Newbury, for 2-year-old colt.

A. B. Fellows, Edw. Harrington, Fred H. Poore, Abel Stickney—*Committee.*

COLTS FOR DRIVING PURPOSES, THREE AND FOUR YEARS OLD.

The Committee on Colts for Driving Purposes, three and four years old, have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$7. First premium, to Edwin H. George, Groveland, for 4-year-old gelding colt.

$7. First premium, to J. H. Nason, Boxford, for 3-year-old filly.

$5. Second premium, to A. H. Adams, Haverhill, for 4-year-old filly.

$5. Second premium, to L. C. Pemberton, Groveland, for 3-year-old filly.

F. A. Russell, Walter F. Gould, W. P. Bailey—*Committee.*

COLTS FOR DRIVING PURPOSES, ONE AND TWO YEARS OLD.

The Committee on Colts for Driving Purposes, one and two years old, have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$5. First premium, to A. Lincoln Lewis, Bradford, for 2-year-old colt.

$5. First premium, to —— Barro, Bradford, for yearling colt.

$3. Second premium, to George B. Parkhurst, Boxford, for 2-year-old colt.

$3. Second premium, to Sylvester P. Smith, Haverhill, for yearling colt.

Peter Holt, Jr., M. C. Andrews, Jos. H. Blunt, O. S. Butler—*Committee.*

SWINE—LARGE BREEDS.

The Committtee on Swine, Large Breeds, have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$6. First premium, to Charles H. Leach, Topsfield, for Chester sow and nine pigs.

$6. First premium, to Charles T. Balch, Groveland, for Yorkshire sow and twelve pigs.

$6. First premium, to Horace Moody, West Newbury, for grade Yorkshire sow and nine pigs.

$6. First premium, to A. W. Butrick, Haverhill, for Berkshire sow and pigs.

$6. First premium, to A. W. Butrick, Haverhill, for Berkshire boar.

$6. First premium, to E. G. Nason, West Newbury, for six Chester weaned pigs.

$6. First premium, to W. L. Hill, Peabody, for Cheshire sow and six pigs.

$6. First premium, to W. L. Hill, Peabody, for Chester white boar.

$6. First premium, to W. L. Hill, Peabody, for Cheshire boar.

$6. First premium, to W. L. Hill, Peabody, for Yorkshire boar.

$4. Second premium, to W. L. Hill, Peabody, for Chester white sow and nine pigs.

$4. Second premium, to W. L. Hill, Peabody, for Yorkshire sow and nine pigs.

$4. Second premium, to W. L. Hill, Peabody, for Berkshire boar.

$4. Second premium, to Isaac C. Day, Boxford, for six weaned pigs.

Charles M. Lunt, J. Arthur Lamson, George A. Dow, John C. Tarlton—*Committee.*

SWINE--SMALL BREEDS.

The Committee on Swine, Small Breeds, have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$6. First premium, to W. L. Hill, Peabody, for small Yorkshire boar.

$4. Second premium, to W. L. Hill, Peabody, for small Yorkshire sow and pigs.

Geo. L. Burnham, Virgil Dow, Isaac C. Day—*Committee.*

SHEEP.

The Committee on Sheep have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$8. First premium, to Richard Newell, West Newbury, for Southdown buck.

$8. First premium, to Richard Newell, West Newbury, for ten grade sheep.

$8. First premium, to J. D. W. French, No. Andover, for ten grade Shropshire sheep.

$5. First premium, to J. D. W. French, No. Andover, for five grade Oxforddown lambs.

$5. First premium, to Isaac C. Day, Boxford, for four Southdown lambs.

$6. Second premium, to Isaac C. Day, Boxford, for ten Southdown sheep.

$3. Second premium, to M. H. Toomey, Newbury, for four lambs.

C. C. Blunt, J. H. Perkins, Edwin Bates, E. G. Nason—*Committee.*

POULTRY.

The Committee on Poultry have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$2. First premium, to G. S. Smith, Haverhill, for Buff Plymouth Rock chicks.

$1. Second premium, to G. S. Smith, Haverhill, for Buff Plymouth Rock chicks.

$2. First premium, to W. W. Osgood, Haverhill, for Silver Polish chicks.

$2. First premium, to W. W. Osgood, Haverhill, for B. P. Brown Leghorn chicks.

$2. First premium, to W. W. Osgood, Haverhill, for ten Brown Leghorn fowls.

$1. Second premium, to W. W. Osgood, Haverhill, for pair S. C. Brown Leghorn fowls.

$1. Second premium, to W. W. Osgood, Haverhill, for trio Light Brahma fowls.

$2. First premium, to W. W. Osgood, Haverhill, for ten Indian Game fowls.

$2. First premium, to W. W. Osgood, Haverhill, for trio Barred Plymouth Rock fowls.

$5. First premium, to W. W. Osgood, Haverhill, for poultry appliances.

$2. First premium, to John F. Jackson, Georgetown, for ten White Wyandottes.

$1. Second premium, to Charles F. Balch, Groveland, for Light Brahma chicks.

$1. Second premium, to John O'Connor, West Newbury, for Red Game fowls.

$2. First premium, to Anson L. Griffin, Lawrence, for Mottled Anconas.

$1. Second premium, to Anson L. Griffin, Lawrence, for Mottled Anconas.

$2. First premium, to Anson L. Griffin, Lawrence, for White Plymouth Rocks.

$2. First premium, to Anson L. Griffin, Lawrence, for Black Minorcas.

$2. First premium, to Anson L. Griffin, Lawrence, for Silver Spangled Hamburgs.

$2. First premium, to Anson L. Griffin, Lawrence, for Buff Leghorns.

$2. First premium, to Elmer E. Durkee, West Peabody, for Light Brahma chicks.

$2. First premium, to J. H. Thompson, Haverhill, for pen Plymouth Rock chicks.

$1. Second premium, to Wm. S. Dole, Groveland, for Barred Plymouth Rock fowls.

$2. First premium, to Sylvester P. Smith, Haverhill, for Andalusian chicks.

$1. Second premium, to L. W. Rogers, West Newbury, for Golden Wyandotte fowls.

$2. First premium, to Thomas Sanders, Haverhill, for pair Game fowls.

$2. First premium, to S. F. Chase, Haverhill, for pen Black Langshan fowls.

$1. Second premium, to S. F. Chase, Haverhill, for pair Black Langshan fowls.

$2. First premium, to S. F. Chase, Haverhill, for Black Langshan chicks.

Diploma to S. F. Chase, Haverhill, for Barred Plymouth Rock chicks.

$1. Second premium, to S. F. Chase, Haverhill, for Silver Wyandotte fowls.

$2. First premium, to S. F. Chase, Haverhill, for Silver Wyandotte chicks.

$1. Second premium, to S. F. Chase, Haverhill, for Barred Plymouth Rocks.

$2. First premium, to S. F. Chase, Haverhill, for Light Brahma fowls.

$2. First premium, to Mrs. M. A. Dummer, Newbury, for Partridge Cochin fowls.

$2. First premium, to Geo. H. Greenman, Haverhill, for Black Cochin fowls.

$2. First premium, to Geo. H. Greenman, Haverhill, for Black Cochin chicks.

$2. First premium, to George C. Perkins, Haverhill, for Black Java fowls.

$2. First premium, to George C. Perkins, Haverhill, for Black Java chicks.

$1. Second premium, to O. D. Morgan, Groveland, for S. L. Wyandotte chicks.

$2. First premium, to O. D. Morgan, Groveland, for S. L. Wyandotte chicks.

$2. First premium, to Elwood T. Wildes, Georgetown, for Silver Polish fowls.

$1. Second premium, to Elwood T. Wildes, Georgetown, for Silver Polish chicks.

$2. First premium, to H. D. Ellis, Haverhill, for pen White Leghorn chicks.

$1. Second premium, to H. D. Ellis, Haverhill, for trio White Leghorn chicks.

$2. First premium, to Chas. C. Chase, Haverhill, for Partridge Cochin.

Diploma to Chas. C. Chase, Haverhill, for pen of White Plymouth Rocks.

$2. First premium, to Chas. C. Chase, Haverhill, for White Plymouth Rock chicks.

$1. Second premium, to Chas. C. Chase, Haverhill, for S. Combed Brown Leghorn chicks.

$1. Second premium, to Harry Noyes, Haverhill, for Black Breasted Bantam chicks.

$1. Second premium, to R. C. Tewkesbury, Amesbury, for White Langshan chicks.

$2. First premium, to R. C. Tewkesbury, Amesbury, for Dark Brahma chicks.

$2. First premium, to R. C. Tewkesbury, Amesbury, for Dark Brahma fowls.

$2. First premium, to R. C. Tewkesbury, Amesbury, for English Red Cap fowls.

$2. First premium, to R. C. Tewkesbury, Amesbury, for Black Spanish fowls.

$2. First premium, to R. C. Tewkesbury, Amesbury, for White Muscovey ducks.

$2. First premium, to R. C. Tewkesbury, Amesbury, for Colored Muscovey ducks.

$5. First premium, to M. H. Sands, Amesbury, for flock Single Comb Brown Leghorns with statement.

$2. First premium, to E. R. Perkins, Salem, for White Houdan fowls.

$2. First premium, to E. R. Perkins, Salem, for Golden Wyandotte fowls.

$2. First premium, to E. R. Perkins, Salem, for White Woodland chicks.

$1. Second premium, to E. R. Perkins, Salem, for White Woodland chicks.

$1. Second premium, to Wm. C. Goodwin, Haverhill, for Black Java chicks.

$2. First premium, to Tuxbury Bros., Amesbury, for White Langshan fowls.

$1. Second premium, to Tuxbury Bros., Amesbury, for White Leghorn fowls.

$2. First premium, to Tuxbury Bros., Amesbury, for White Langshan chicks.

$2. First premium, to Tuxbury Bros., Amesbury, for White Wyandotte chicks.

$1. Second premium, to Tuxbury Bros., Amesbury, for White Wyandotte chicks.

$1. Second premium, to Oscar Gowan, West Newbury, for Red Game Bantam chicks.

$2. First premium, to Harry C. Wales, Bradford, for Bantams.

$2. First premium, to J. W. Brown, Rowley, for pen Black Minorca chicks.

$1. Second premium, to J. W. Brown, Rowley, for pair Black Minorca chicks.

$2. First premium, to Charles Collingill, Haverhill, for Red Game Bantam chicks.

$2. First premium, to J. Hanson & Son, Groveland, for Pekin ducks.

$2. First premium, to A. W. Riley, Haverhill, for Brazilian ducks.

$1. Second premium, to A. W. Riley, Haverhill, for White Plymouth Rock fowls.

$1. Second premium, to A. W. Riley, Haverhill, for Black Minorca fowls.

$2. First premium, to A. W. Riley, Haverhill, for Houdan Cross fowls.

$1. Second premium, to A. W. Riley, Haverhill, for Houdan fowls.

$2. First premium, to John Rodgers, West Newbury, for B. R. Game fowls.

$2. First premium, to John Rodgers, West Newbury, for Game fowls.

$2. First premium, to John Rodgers, West Newbury, for Blue Pyle chicks.

$1. Second premium, to Edmund Tardiff, Methuen, for Black Langshan chicks.

$1. Second premium, to Thomas H. West, Haverhill, for White Pekin ducks.

$1. Second premium, to E. E. Hill, Haverhill, for R. B. B. Game Bantam fowls.

Diploma to Eugene Roaf, Newburyport, for Pen Barred Plymouth Rocks.

$2. First premium, to A. W. Butrick, Haverhill, for native turkey.

$2. First premium, to A. W. Butrick, Haverhill, for brood of native turkeys.

J. H. Tenney, F. G. Phillips, A. F. Tenney—*Committee*

PLOUGHING WITH DOUBLE TEAMS.

The Committee on Ploughing with Double Teams have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$10. First premium, to C. K. Ordway & Son, West Newbury, four oxen.

John L. Shorey, Abel Stickney, George L. Averill—*Committee.*

PLOUGHING WITH DOUBLE TEAMS, SWIVEL PLOUGH.

The Committee on Ploughing with Double Teams, Swivel Plough, have attended to their duty, and respect-

fully report to the secretary that they have made the following award:

$8. First premium, to James C. Poor, No. Andover, four horses.

Andrew Dodge, A. P. Fuller—*Committee.*

PLOUGHING WITH HORSES, ANY PLOUGH EXCEPT SWIVEL.

The Committee on Ploughing with Horses, with any Plough except Swivel, have attended to their duty and respectfully report to the secretary that they have made the following awards:

$8. First premium to F. H. Poore, West Newbury, 4 horses.

$8. First premium to Carlton Little, Newbury, 2 horses, "Eagle plough No. 20."

$6. Second premium to W. E. Merrill, West Newbury, 2 horses, Hussey plough.

$4. Third premium to John F. Hills, West Newbury, 2 horses, Hussey plough.

L. H. Bailey, M. H. Poor, H. M. Goodrich, C. N. Maguire, C. F. Appleton—*Committee.*

PLOUGHING WITH TWO HORSES, SWIVEL PLOUGH.

The Committee on Ploughing with Two Horses, Swivel Plough, have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$8. First premium to A. M. Robinson, No. Andover, Tyler plough, No. 76.

$6. Second premium to M. H. Carr, West Newbury, Climax plough, No. 30.

Benj. P. Ware, George W. Bray, E. Pope Barrett, Geo. S. Weston—*Committee.*

PLOUGHING WITH THREE HORSES.

The Committee on Ploughing with Three Horses have attended to their duty, and respectfully report to the secretary that they have made the following award:

$8. First premium to W. E. Merrill, West Newbury.

Nath'l P. Perkins, Edwin Bates, A. A. Rutherford—*Committee.*

PLOUGHING WITH SULKY PLOUGH.

The Committee on Ploughing with Sulky Ploughs, have attended to their duty, and respectfully report to the secretary that they have made the following award:

$8. First premium to Fred A. Russell, Methuen, Syracuse plough.

Andrew Mansfield, David M. Cole, Charles F. Austin—*Committee.*

PLOUGHING BY BOYS LESS THAN FIFTEEN YEARS OF AGE.

The Committee on Ploughing by boys have attended to their duty, and unanimously recommend the following:

$8. First premium to Charles S. Little, Haverhill, Sulky plough.

Asa T. Newhall—*for the Committee.*

HARROWS.

The Committee on Harrows have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$8. First premium to Charles S. Little, Haverhill, "Morgan Spading harrow."

$6. Second premium to Geo. H. Rogers, No. Andover, "New Acme harrow."

J. J. H. Gregory, F. H. Foster, E. A. Emerson, B. P. Pike, T. H. O'Neil—*Committee.*

AGRICULTURAL IMPLEMENTS.

The Committee on Agricultural Implements have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$5. First premium to J. W. Gordon, Haverhill, for improved market wagon.

$3. Gratuity to J. H. Nason, Boxford, for a superior market wagon.

$5. First premium to Geo. E. Daniels, Rowley, for 2 horse cart.

$1. Gratuity to Geo. E. Daniels, Rowley, for pair of wheels.

$4. Gratuity to H. H. Spofford, Groveland, for farm wagons and carts.

$10. First premium to Hanscom Bros., Haverhill, for collection of implements.

$1. Gratuity to James W. Bowdoin, Haverhill, for tree protector.

$2. Gratuity to J. J. H. Gregory, for collection of implements.

$1. Gratuity to Daniel Fuller, Topsfield, for storm door for carriage.

$2. Gratuity to Robert A. Amend, West Newbury, for collection of implements.

$1. Gratuity to Robert A. Amend, West Newbury, for water elevator and purifying pump.

$1.50. Gratuity to Oscar Gowen, West Newbury, for Main's green bone cutter.

Benj. P. Ware, Albert Emerson—*Committee.*

CARRIAGES.

The Committee on Carriages have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$15. Gratuity to H. H. Storey, agent, Merrimac, for Goddard buggy.

$10. Gratuity to T. W. Lane, Amesbury, for phaeton buggy.

$3. Gratuity to T. W. Lane, Amesbury, for Republican wagon.

Aaron Sawyer, J. A. J. Sawyer, Geo. E. Daniels—*Committee.*

IN EXHIBITION HALL.

DAIRY.

The Committee on Dairy have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$4. Second premium, to Oscar Gowen, West Newbury, for greatest yield of butter, from a single cow with statement.

$7. First premium, to J. S. Tuck, Georgetown, 5 lbs. butter.

$5. Second premium, to W. H. Stevens, West Newbury, for 5 lbs. butter.

$3. Third premium, to Mrs. H. G. Bartlett, Salisbury, for 5 lbs. butter.

$1. First premium, to W. W. Osgood, Haverhill, for Light Brahma eggs.

$1. First premium, to W. W. Osgood, Haverhill, for Wyandotte eggs.

$1. First premium, to W. W. Osgood, Haverhill, for B. Leghorn eggs.

$1. First premium, to W. W. Osgood, Haverhill, for Indian Game eggs.

$1. First premium, to Elmer E. Durkee, West Peabody, for Light Brahma eggs.

REPORT OF THE COMMITTEE ON DAIRY.

The dairy interests of New England stand to-day the chief corner-stone of her agriculture, furnishing employment to a large proportion of our farmers, and meanwhile

transforming the sweet herbage of her hillsides into milk and butter, which so readily find a market in our adjacent villages.

Massachusetts has nearly two hundred thousand cows valued at some seven millions of dollars, while our county of Essex has fifteen thousand, valued at six hundred thousand dollars, an average of $40 per head.

The sale of milk, cream and butter for this state amounts to nearly fifteen million dollars annually, more than any other single agricultural product. Of more value than the combined hay and grain crop and nearly one third the value of all farm products taken together.

That this great industry, so vital to the welfare of the farmers of New England, should be fostered, passes without controversy, and of the numerous methods for so doing, none can be more productive of good results than such methods as shall encourage a desire to learn more fully the details of the business.

Our experimental stations are doing a noble work in this direction which must be productive of grand results during the coming years, the more important of which are the testing of the different breeds of cows, the value of different kinds of fodders and their compounding, investigation of the process of butter making, etc.

A hardly less important work is that of having these results adopted by the farmer, and to popularize the work of the stations is, I believe, one of the large fields of usefulness for our agricultural societies.

To this end our societies should offer premiums tending to draw out the thought of the exhibitor, as well as the product of his labors.

Your committee found eight samples of butter entered for their consideration, and it is, perhaps, needless to state that all of the samples were well made; were we to criticise we should suggest more attention to the extraction of the buttermilk and a more even salting of the butter.

A neat and attractive print should also be considered as

it is well known that the appearance of an article goes far towards the selling of it.

We would suggest that the society furnish their committee in the future with a scale of points, by which to judge the exhibit. It would assist the committee in their duties and at the same time could be made of service to the exhibitors, showing them wherein their butter was defective. Further we would suggest that the society request a more extended statement from the exhibitor than is now usually made, the statement being too frequently a perfunctory affair containing little of real merit, and not in keeping with the intent of the society when it offered so liberal a premium as is given in this department.

We found but one competitor for the premium to be awarded for the statement showing the largest quantity of butter from any quantity of milk, the product of a single cow, that of Mr. Oscar Gowen, of West Newbury. His statement shows that the milk from a grade Ayrshire cow produced one lb. butter from less than sixteen lbs. of milk, the feed being pasture and two quarts of meal. This is a very commendable showing. As the statement was not, in the opinion of your committee, so explicit and extended as was desired, it was decided to award the second premium of four dollars.

Your committee found entered upon their book several lots of eggs. This was found to be according to the instructions of the society. As the premiums are offered under the poultry department, that committee acting upon the grounds a mile away from the hall and with no notice that such entries had been made in their department, they could not be expected to pass upon them. Your committee, therefore, under instructions from the society awarded upon this exhibit. We found several plates of 13 eggs; as the rules call for but 12 we were obliged to pass several of them, and the others were judged with the knowledge that the committee were acting in a department foreign to them. We can hardly understand the need of this offer upon eggs.

It seems uncalled for and we would recommend that it be abolished or, at least, given in charge of its appropriate committee.

Respectfully submitted,
JOHN Q. EVANS,
Chairman.

STATEMENT OF OSCAR GOWEN.

The cow I wish to enter for premium for the first week in June, July, August and September for amount of butter from any quantity of milk, is a grade Ayrshire. She dropped her last calf July 9, 1893 and is due to come in in January, 1895.

First week in June, 144 lbs. milk, which made 9 lbs. butter. Her feed was pasture only.

First week in July, 161 lbs. milk, which made 10 lbs. butter. Her feed was pasture, one quart corn meal and two quarts shorts.

First week in August, 75 lbs. milk, which made 6½ lbs. butter. She was kept in the barn and fed on buckwheat in blossom and one quart of corn meal.

First week in September she gave 112 lbs. milk, which made 7 lbs. butter. Her feed was pasture, corn fodder and two quarts of corn meal.

Owing to the buffalo fly I do not think that the cow gave nearly as much as she would, and it has been very dry this season.

O. GOWEN.

STATEMENT OF J. S. TUCK.

These six lbs. of butter were made from the milk of Guernsey and Jersey cows. My milk was set in pans about two thirds full and skimmed in 36 hours. After enough

cream was collected, it was churned and washed in two waters and salted at the rate of one ounce of salt to one pound of butter. After standing 48 hours, it was worked over and stamped.

J. S. Tuck.

STATEMENT OF W. H. STEVENS.

The butter exhibited by me was made as follows:

The milk was set in large glass jars, partly immersed in cold water. Milk drawn therefrom after twelve hours setting, and the cream ripened twenty-four hours in a glass jar, then churned in a Davis Swing Churn. As soon as it became granulated, it was washed in cold water in the churn, and salted with one and one eighth ounces of salt to the pound. After standing twelve hours, it was worked with a lever butter worker and moulded for market.

W. H. Stevens.

STATEMENT OF MRS. H. S. BARTLETT.

The milk of which this butter was made was drawn from the cow in the usual way, was set in shallow pans and the cream taken off in about twenty-four hours, the cream in the pot was stirred every time a fresh quantity was added, and after standing about twelve hours in a temperature of from 65 to 70 degrees, was churned in a common revolving churn. The butter was taken from the churn and thoroughly washed, then worked and salted. After standing twelve to twenty-four hours it was worked again and stamped as you see it. There was no ice used in making it, and no coloring matter of any kind put in. The cow had a good pasture and one quart of gluten meal daily and nothing more.

Mrs. H. S. Bartlett.

BREAD AND CANNED FRUIT.

The Committee on Bread and Canned Fruit have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$3.00. First premium, to Lizzie J. Wilson, Beverly, for white bread.

$2.00. First premium, to Mrs. Edwin Haseltine, Haverhill, for graham bread.

$2.00. Second premium, to Mrs. G. L. Burnham, No. Andover, for white bread.

$1.00. Second premium, to Mrs. G. L. Burnham, No. Andover, for graham bread.

$1.00. First premium, to Mrs. Annie L. Cole, West Boxford, for brown bread.

$1.00. Third premium to Mrs. Melissa Andrews, Bradford, for white bread.

.50. Gratuity, to Mrs. Frank W. Poor, Haverhill, for white bread.

.50. Gratuity, to Clara L. Bailey, Andover, for brown bread.

.50. Gratuity, to Mrs. Edwin Haseltine, Haverhill, for brown bread.

$3.00. First premium, to Mrs. C. O. Barker, No. Andover, for thirty-eight jars canned fruit.

$2.00. Second premium, to Mrs. T. Hale, Rowley, for canned fruit.

$1.00. Second premium, to I. F. Day, Hamilton, for nine jars canned vegetables.

$3.00. First premium, to E. J. Andrews, Boxford, for dried apples.

$2.00. Second premium, to Nellie Spofford, Boxford, for dried apples.

$1.00. Gratuity, to Mrs. Thaddeus Hale, Rowley, for jellies.

.50. Gratuity, to C. L. Abbott, Haverhill, for beach plums.

Clara A. Hale, Mrs. J. H. Chandler, Mrs. B. F. Huntington—*Committee.*

STATEMENT OF WHITE BREAD MADE BY MRS. LIZZIE J. WILSON.

Two quarts wheat flour, two tablespoonfuls salt, four tablespoonfuls sugar, one-half compressed yeast cake, one-half pint milk and warm water. Let rise over night. Bake one hour. This makes two loaves.

STATEMENT OF WHITE BREAD MADE BY MRS. GEO. L. BURNHAM.

Three quarts of "Purity" flour, a brand of Haxall, one pint of milk scalded, one pint of water, one tablespoonful butter, one tablespoonful sugar, one teaspoonful salt, one-half compressed yeast cake. Moulded fifteen minutes and let rise over night, put into pans and let rise to twice original size. Baked three-quarters of an hour in moderate oven.

STATEMENT OF GRAHAM BREAD MADE BY MRS. EDWIN HASELTINE.

Two cups of milk, one-half cup of yeast, two tablespoonfuls of molasses, a teaspoonful of salt, one-half of soda, two cups of Graham meal and Haxall flour enough to stir stiff, let rise over night; in the morning cut it down, let rise again, then mould and put in the tins, let rise twice its size. Bake one hour.

STATEMENT OF BROWN BREAD MADE BY MRS. ANNIE L. COLE.

This bread was made as follows: Two cups of Indian meal, three cups of rye meal, one small cup of molasses, one pint of water, one teaspoonful of soda, one teaspoonful of salt, and steamed three hours.

STATEMENT OF MRS. THADDEUS HALE.

CANNED FRUITS.

Make a syrup of one to two cups of sugar and a quart of water, according to the acidity of the fruit to be canned. Cook until you are sure all the fruit is boiling hot, then

can. In canning plums, pears and peaches, after removing the skins I boil them in clear water before putting them in the syrup, this makes the syrup clearer.

JELLIES.

Boil fruit in porcelain kettle twenty minutes. Strain through fine cheese cloth. Boil five minutes. Allow one pound of sugar to pint of juice. Heat sugar. Boil one minute after adding sugar.

SPICED CURRANTS.

Three pounds of sugar, one pint of vinegar, tablespoonful of cloves, cinnamon and allspice. Make into a syrup, add six pounds of currants ; boil twenty minutes.

HONEY.

The Committee on Honey have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$3. First premium, to John Barker, No. Andover, for honey in comb and strained.

$2. Second premium, to Oscar Gowen, West Newbury, for honey.

$1. Gratuity, to Edwin Haseltine, Haverhill, for honey.

Henry Alley, John J. Gould, F. W. Poor—*Committee.*

PEARS.

The Committee on Pears have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$3.00. First premium, to Cochickewick Farm, No. Andover, for D'Anjou.

$3.00. First premium, to W. Burke Little, West Newbury, for Clairgeau.

$3.00. First premium, to E. Hutchins, Haverhill, for Seckel.

$3.00. First premium, to Frederic Lamson, Salem, for Belle Lucrative.
$3.00. First premium, to G. McIntire, Lawrence, for Comice.
$3.00. First premium, to James Wilson, Topsfield, for Onandago.
$3.00. First premium, to Allen Barr, Lawrence, for Vicar.
$3.00. First premium, to Allen Barr, Lawrence, for Beurre Bosc.
$3.00. First premium, to S. F. Newman, Newbury, for Bartlett.
$3.00. First premium, to W. A Stewart, Haverhill, for Louise Bonne.
$3.00. First premium, to Edwin Bates, Lynn, for Duchess.
$3.00. First premium, to Edwin Bates, Lynn, for Lawrence.
$6.00. First premium, to Edwin Bates, Lynn, for collection 15 varieties.
$3.00. First premium, to Albert Emerson, Haverhill, for Sheldon.
$1.50. Gratuity, to Michael Shea, Lawrence, for Sheldon.
.50. Gratuity, to W. H. Hayes, No. Andover, for Flemish Beauty.
$1.00. Gratuity, to W. Burke Little, Newbury, for D'Anjou.
.50. Gratuity, to T. P. Hale, Rowley, for Seckel.
$1.50. Gratuity, to W. M. Cole, Boxford, for Duchess.
.50. Gratuity, to P. M. Neal, Lynn, for Flemish Beauty.
$1.00. Gratuity, to Jesse Blake, Beverly, for de Congress.
.50. Gratuity, to G. McIntire, Lawrence, for Seckel.
$1.00. Gratuity, to G. McIntire, Lawrence, for Bosc.
$1.00. Gratuity, to J. McKergen, Danvers, for de Congress.
$1.00. Gratuity, to S. J. Barr, Lawrence, for Lawrence.
.50. Gratuity, to William Hilton, Bradford, for Flemish Beauty.
$1.00. Gratuity, to Walter B. Allen, Lynn, for Urbaniste.
.50. Gratuity, to Walter B. Allen, Lynn, for Bonne de Jersey.
$1.00. Gratuity, to J. L. Knight, Haverhill, for Beurre Bosc.
$1.00. Gratuity, to C. M. Lunt, Newbury, for Bansoch.
$1.50. Gratuity, to C. M. Lunt, Newbury, for Clairgeau.
$1.00. Gratuity, to Edwin Bates, Lynn, for Bartlett.
.50. Gratuity, to Abel Stickney, Groveland, for Flemish Beauty.

$1.00. Gratuity, to E. F. Webster, Haverhill, for Seckel.
.50. Gratuity, to E. F. Webster, Haverhill, for Flemish Beauty.
$1.00. Gratuity, to Mrs. M. Harmon, Haverhill, for Sheldon.
.50. Gratuity, to Eben Webster, Haverhill, for Belle Lucrative.

Peter M. Neal, B. F. Stanley, Thomas P. Hale, Charles W. Woods, A. C. Osborne—*Committee.*

APPLES.

The Committee on Apples have attended to their duty and respectfully report to the secretary that they have made the following awards:

$3.00. First premium, to C. M. Lunt, Newbury, for Baldwin.
$3.00. First premium, to S. B. George, Groveland, for Danvers Sweet.
$3.00. First premium, to R. B. Day, Groveland, for King of Tompkins.
$3.00. First premium, to J. Henry Hill, Amesbury, for Red Russett.
$3.00. First premium, to J. Henry Hill, Amesbury, for Bailey's Sweet.
$3.00. First premium, to J. Henry Hill, Amesbury, for Smith's Cider.
$3.00. First premium, to E. M. Richardson, Groveland, for Tolman Sweet.
$3.00. First premium, to S. Titcomb, West Newbury, for Drap d'Or.
$3.00. First premium, to Enoch Adams, Groveland, for Hubbardston.
$3.00. First premium, to H. A. Poore, Haverhill, for Porter.
$3.00. First premium, to Mrs. Horace Ware, Marblehead, for Pickman Pippin.
$3.00. First premium, to Edwin P. Noyes, Newbury, for Roxbury Russett.
$3.00. First premium, to Michael Shea, Lawrence, for Gravenstein.

$3.00. First premium, to D. A. Illsley, Newbury, for Hunt's Russett.

$3.00. First premium, to A. Sylvester, Haverhill, for R. I. Greening.

$3.00. First premium, to Abel Stickney, Groveland, for Snow apple.

$3.00. First premium, to H. M. Killam, Boxford, for Sweet Baldwin.

$6.00. First premium, to J. Henry Hill, Amesbury, for collection.

$1.50. First premium, to N. E. Ladd, Groveland, for Hyslop crab apple.

$1.50. First premium, to H. S. Savory, Groveland, for Wolf River crab apple.

$1.50. First premium, to Geo. F. Sanger, Peabody, for President.

$1.50. First premium, to Mrs. J. P. Jones, Georgetown, for Maiden Blush.

$1.50. First premium, to George G. Carr, West Newbury, for Gloria Munde.

$1.50. Gratuity, to G. W. Chadwick, Boxford, for collection.

$1.00. Gratuity, to W. M. Cole, Boxford, for collection.

$1.00. Gratuity, to E. J. Andrews, Boxford, for collection.

$1.00. Gratuity, to A. S. Langley, Groveland, for Groveland.

$1.50. Gratuity, to T. P. Hale, Rowley, for collection.

$1.00. Gratuity, to C. K. Ordway, West Newbury, for a new apple.

$1.50. Gratuity, to G. W. Pratt, Danvers, for a new apple.

$1.50. Gratuity, to G. W. Richardson, Lynn, for Wealthy.

$1.50. Gratuity, to W. H. Hayes, No. Andover, for Northern Spy.

$1.00. Gratuity, to C. L. Sargent, Haverhill, for Northern Spy.

$1.50. Gratuity, to C. M. Lunt, Newbury, for McIntosh Red.

$1.50. Gratuity, to W. Smith, Rowley, for Sweet Baldwin.

$1.00. Gratuity, to B. Griffin, Lawrence, for collection.

$1.50. Gratuity, to J. Henry Hill, Amesbury, for Washington.

$2.00. Gratuity, to J. Henry Hill, Amesbury, for apples.

T. C. Thurlow, Edward K. Lee, Andrew Nichols, B. F. Huntington, William Willcomb—*Committee.*

PEACHES, GRAPES, AND ASSORTED FRUIT.

PEACHES.

The Committee on Peaches, Grapes and Assorted Fruit, have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$2.00. First premium, to Minot Killam, Haverhill, for Late Crawford.

$2.00. First premium, to John Barker, No. Andover, for Old Mixon.

$2.00. First premium, to Edwin Bates, Lynn, for Essex Co. seedling.

$3.00. First premium, to W. M. Hayes, No. Andover, for collection of peaches.

$6.00. First premium, to Edwin Bates, Lynn, for assorted fruit.

$1.00. Gratuity, to S. M. Titcomb, West Newbury, for Old Mixon.

$1.00. Gratuity, to Frederic Lamson, Salem, for sweet peaches.

$1.00. Gratuity, to John Q. Evans, Salisbury, for Late Crawford.

$1.00. Gratuity, to E. P. Sargent, Merrimac, for seedling.

$1.00. Gratuity, to E. H. Foster, Haverhill, for Foster's seedling.

$1.00. Gratuity, to E. H. Foster, Haverhill, for Crawford.

.75. Gratuity, to Mrs. E. C. Granville, Newburyport, for peaches "Stump of the World."

.50. Gratuity, to G. W. Chadwick, Boxford, for Woodside.

GRAPES.

$3.00. First premium, to C. B. Somes, Groveland, for Niagara.

$3.00. First premium, to J. F. Keif, Haverhill, for Brighton.

$3.00. First premium, to J. Henry Hill, Amesbury, for Delaware.

$3.00. First premium, to Charles Knight, Haverhill, for Concord.

$3.00. First premium, to W. P. Hutchinson, Danvers, for Hartford Prolific.

$7.00. First premium, to W. P. Hutchinson, Danvers, for collection, ten varieties.

$3.00. First premium, to Edwin Bates, Lynn, for Worden Seedling.

$3.00. First premium, to C. M. Lunt, Newbury, for Moore's Early.

$2.00. Gratuity, to Edwin Bates, Lynn, for collection ten varieties.

$1.00. Gratuity, to W. P. Hutchinson, Danvers, for Green Mountain.

$1.00. Gratuity, to W. P. Hutchinson, Danvers, for Niagara.

$1.00. Gratuity, to W. P. Hutchinson, Danvers, for Brighton.

.75. Gratuity, to W. P. Hutchinson, Danvers, for Florence.

.75. Gratuity, to W. P. Hutchinson, Danvers, for Moore's Early.

.75. Gratuity, to Charles Knight, Haverhill, for Pocklington.

.50. Gratuity, to Geo. D. Walton, Peabody, for Pocklington.

.50. Gratuity, to Jennie P. Carlton, West Newbury, for Concord.

.50. Gratuity, to S. J. Barr, Lawrence, for Worden's Seedling.

PLUMS.

$2.00. First premium, to G. W. Chadwick, Boxford, for Damson.

$2.00. First premium, to H. A. Poor, Haverhill, for plums.

$2.00. First premium, to G. W. Richardson, Lynn, for Mange.

$2.00. First premium, to S. J. Barr, Lawrence, for Yellow Egg.

$2.00. First premium, to Otis F. Brown, Peabody, for Golden Drop.

$2.00. First premium, to R. B. Day, Groveland, for Pond's Seedling.

$2.00. First premium, to R. B. Day, Groveland, for Green Gage.

$2.00. First premium, to R. B. Day, Groveland, for Selwyn's.

$2.00. First premium, to J. H. Tenney, Rowley, for Reine Claude.

$2.00. First premium, to J. H. Tenney, Rowley, for Quackenboss.

$2.00. First premium, to Abel Stickney, Groveland, for McLaughlin.

$2.00. First premium, to Charles F. Knight, Newbury, for Purple Egg.

$2.00. First premium, to Charles F. Knight, Newbury, for Red Seedling.

.50. Gratuity, to Charles F. Knight, Newbury, for Green Gage.

.50. Gratuity, to Charles F. Knight, Newbury, for Lombard.

QUINCES.

$3.00. First premium, to C. O. Barker, No. Andover, for Orange quince.

.50. Gratuity, to Cochickewick Farm, No. Andover, for Champion quince.

.75. Gratuity, S. P. Smith, Haverhill, for Pear quince.

.50. Gratuity, to Albert Emerson, Haverhill, for Pear quince.

.50. Gratuity, to L. K. Pemberton, Groveland, for Orange quince.

The Committee on Peaches, Grapes and Assorted Fruits, would beg leave to make the following additional report. We were pleased to note the increased interest taken in our department, and the attention given to table fruits.

We have seldom, if ever, seen as large and beautiful display, as at the exhibition of 1894. Peaches: We find premiums to be awarded to best yellow flesh and best white flesh Essex Co. seedling. Also, for best collection. Most exhibitors supposed that Essex County seedling meant the best seedling peach raised in Essex Co. But we learn from good authority that there is a distinct variety of peach, bearing the name of Essex County Seedling. This is confounding, and we would suggest that peach be given another name. Also, that any seedling peach raised in Essex county, which has received an award for two consecutive years, should be named by the grower or society, and thereafter be designated by said name. We would call attention to some very excellent seedling peaches exhibited. One was called the Foster seedling, probably a seedling from the well known Foster peach, and in quality, quite

equal to its parent, of good size and beautiful in appearance. Also a white fleshed peach exhibited by Frederic Lamson, of Salem, of delicious flavor, and well worthy of cultivation.

Plums: A premium is offered for a plate of plums. We think it would be better to name the several varieties and the number necessary to constitute a plate, either nine or twelve specimens, then there would be more uniformity in display. We would call attention to a small green plum of most excellent quality, exhibited, which appears to be very nearly related to the famous Green gage, which doubtless holds a like position in plums as the Seckel pear does in pears. The claim made for this plum was, that all sprouts from the tree would produce the same variety of fruit, hence it must needs be a seedling. We deem it of highest excellence, and well worthy of the attention of the Society. We prefer ten drops of honey, like this, to a tablespoonful of sorgum syrup from the mammoth varieties.

Quinces: In the matter of quinces we find no definite number named for a display. The exhibit was good and we were much gratified to note that a majority of the growers still hold on to the Orange quince—although it may not be quite as large as some of the other varieties, holds as yet, we think the first place in quality. The Angiers and Portugal varieties have until recently only been used as stocks for making dwarf pears. The Champion appears to be the best and must have sprung from the Rhea's seedling, one of the pear shaped varieties.

Grapes: The grapes were of most excellent quality, as all fruits are this year. But the committee were of the opinion that some of the exhibits must have been raised on girdled vines. In most Horticultural Societies, such fruit so raised, is not allowed to compete for a premium.

We would ask that some ruling be made by the society, in this matter, and the same be stated in connection with the premiums offered in future, for the awarding committee's guidance.

J. W. Goodell, *Chairman.*

PLANTS.

The Committee on Plants have attended to their duty and respectfully report to the secretary that they have made the following awards:

$10.00. First premium, to Joseph J. Conley, Newburyport, for collection.

$5.00. Second premium, to Edward Flynn, Lawrence, for collection.

$1.00. First premium, to T. J. King, West Newbury, for ferns.

$5.00. Gratuity, to T. C. Thurlow, West Newbury, for collection of evergreens.

$1.50. Gratuity, to Wood, Haverhill, for chrysanthemums.

$1.00. Gratuity, to Fred Bonin, Haverhill, for cacus.

$1.00. Gratuity, to George Bonin, Haverhill, for cacus.

.50. Gratuity, to E. A. Manser, Bradford, for cotton plant.

.50. Gratuity, to Mrs. Carrie A. Keyes, Haverhill, for begonia.

T. J. King, H. W. Marsh, Bertha A. Chandler, S. Alice George, Willard P. Smith—*Committee.*

FLOWERS.

The Committee on Flowers have attended to their duty and respectfully report to the secretary that they have made the following awards:

$5.00. First premium, to Mrs. C. N. S. Homer, Georgetown, for one hundred specimens native flowers.

$3.00. Second premium, to Mrs. J. A. Cain, Lynn, for one hundred specimens garden flowers.

$2.00. First premium, to B. F. Bickum, Haverhill, for pair bouquets native flowers.

$2.00. First premium, to Mrs. J. Henry Hill, Amesbury, for basket garden flowers.

$2.00. First premium, to Nettie L. Webster, Haverhill, for native flowers.

$2.00. First premium, to T. C. Thurlow, West Newbury, for hardy phlox.

$2.00. First premium, to Myra B. Branscom, Haverhill, for pansies.

$1.00. First premium, to Joseph J. Conley, Newburyport, for 12 lg. dahlias.

$1.00. First premium, to Mrs. J. A. Cain, Lynn, for 12 double geraniums.

$1.00. First premium, to Abbie L. Cain, Lynn, for garden annuals.

$1.00. First premium, to Abbie L. Cain, Lynn, for 12 pompon dahlias.

$1.00. First premium, to Mrs. M. E. Burleigh, Haverhill, for 12 nasturtiums.

$1.00. First premium, to Mrs. M. E. Burleigh, Haverhill, for 12 vict. astors.

$1.00. First premium, to Mrs. M. E. Burleigh, Haverhill, for 12 zinneas.

$1.00. First premium, to Albert E. Cain, Lynn, for 24 marigolds.

$1.00. First premium, to Mrs. J. Henry Hill, Amesbury, for 24 French marigolds.

$1.00. First premium, to Mrs. J. A. Cain, Lynn, for coxcombs.

$1.00. First premium, to Mrs. Geo. L. Burnham, No. Andover, for collection sweet peas.

$1.00. First premium, to Mrs. M. E. Burleigh, Haverhill, for 12 Dianthus.

$1.00. First premium, to Miss I. Finley, Bradford, for single petunias.

$1.00. Second premium, to Mrs. Edwin Haseltine, Haverhill, for pair bouquets.

$1.00. Second premium, to Mrs. G. L. Emerson, Haverhill, for pair garden bouquets.

$1.00. Second premium, to Mrs. N. E. Ladd, Groveland, for basket garden flowers.

$1.00. Second premium, to Mrs. M. E. Burleigh, Haverhill, for pansies.

$1.00. Gratuity, to Stanley P. Ladd, Groveland, for collection 73 wild flowers.

$1.00. Gratuity, to Andrew Lackey, Haverhill, for collection of dahlias.

$1.00. Gratuity, to Wm. Ferguson, Groveland, for gladiolus.
$1.00. Gratuity, to Fred Luce, Haverhill, for collection carnations.
$1.00. Gratuity, to T. C. Thurlow, West Newbury, for collection of roses.
$1.00. Gratuity, to Fred A. Luce, Haverhill, for 24 African marigolds.
$1.00. Gratuity, to Fred A. Luce, Haverhill, for 2 varieties astors.
.50. Gratuity, to Mrs. J. Henry Hill, Amesbury, for single dahlias.
.50. Gratuity, to Mrs. J. A. Cain, Lynn, for 12 single geraniums.
.50. Gratuity, to Abbie L. Cain, Lynn, for 24 zinneas.
.50. Gratuity, to Mrs. E. G. McIntire, Lawrence, for scabiosis.
.50. Gratuity, to T. C. Thurlow, West Newbury, for delphiniums.
.50. Gratuity, to Joseph J. Conley, Newburyport, for French cannas.
.50. Gratuity, to Miss C. M. Webster, Haverhill, for dahlias.
.75. Gratuity, to T. C. Thurlow, West Newbury, for gladiolus
$5.00. Gratuity, to Ettore Tassinari, Danvers Asylum, for pyramid of flowers.

J. H. Keif, E. E. Woodman, Mrs. J. Henry Hill, Mrs. David Warren—*Committee.*

VEGETABLES.

The Committee on Vegetables have attended to their duty and respectfully report to the secretary that they have made the following awards:

$3.00. First premium, to Lyman George, Methuen, for Danvers yellow globe onions.
3.00. First premium, to Wm. Burke Little, Newbury, for yellow flat onions.
3.00. First premium, to Wm. Burke Little, Newbury, for Red flat onions.

3.00. First premium, to John W. Parkhurst, Boxford, for Early Rose potatoes.
3.00. First premium, to Geo. L. Averill, No. Andover, for Beauty of Hebron potatoes.
3.00. First premium, to W. W. Osgood, Haverhill, for Clark's No. 1 potato.
3.00. First premium, to Wm. Burke Little, Newbury, for Pearl of Savoy potato.
3.00. First premium, to C. W. Gowen, West Newbury, for Early Maine potato.
3.00. First premium, to A. P. Russell, Methuen, for Savoy cabbage.
3.00. First premium, to A. P. Russell, Methuen, for Red cabbage.
3.00. First premium, to A. P. Russell, Methuen, for Bay State squash.
3.00. First premium, to Fred A. Russell, Methuen, for Stone Mason cabbage.
3.00. First premium, to M. H. Connor, West Newbury, for All Season's cabbage.
3.00. First premium, to W. K. Cole, Boxford, for Fottler's Brunswick cabbage.
3.00. First premium, to T. C. Durkee, West Peabody, for cauliflower.
2.00. First premium, to F. W. Poore, Haverhill, for celery.
3.00. First premium, to Wm. Burke Little, Newbury, for marrow squash.
3.00. First premium, to A. G. Whittier, Bradford, for Turban squash.
3.00. First premium, to W. Ferguson, Groveland, for Hubbard squash.
3.00. First premium, to W. K. Cole, Boxford, for Marblehead squash.
3.00. First premium, to F. A. Russell, Methuen, for Essex Hybrid squash.
3.00. First premium, to W. K. Cole, Boxford, for Butman squash.
2.00. First premium, to W. H. Hayes, No. Andover, for Nut melon.

2.00. First premium, to A. G. Whittier, Bradford, for Musk melon.

2.00. First premium, to W. H. Hayes, No. Andover, for Salmon flesh melon.

2.00. First premiun, to Virgil Dow, Methuen, for water melon.

3.00. First premium, to C. W. Gowen, West Newbury, for tomatoes.

5.00. First premium, to Cochickewick Farm, No. Andover, for collection vegetables.

3.00. First premium, to Wm. Burke Little, Newbury, for Eclipse beet.

3.00. First premium, to A. G. Whittier, Bradford, for Dewings beet.

3.00. First premium, to Wm. Burke Little, Newbury, for Edmunds beet.

3.00. First premium, to Wm. Burke Little, Newbury, for Short horn carrot.

3.00. First premium, to Fred A. Russell, Methuen for Danvers carrot.

3.00. First premium, to Edwin Bates, Lynn, for mangel wurtzel.

3.00. First premium, to H. H. Stiles, Middleton, for white top turnip.

3.00. First premium, to M. H. Connor, West Newbury, for yellow ruta baga.

3.00. First premium, to W. K. Cole, Boxford, for white ruta baga.

3.00. First premium, to F. A. Russell, Methuen, for parsnips.

3.00. First premium, to S. F. Newman, Newbury, for early Corey corn.

3.00. First premium, to F. A. Russell, Methuen, for late sweet corn.

3 00. First premium, to Andrew Lane, Rockport, for cranberries.

5.00. First premium, to Cochickewick Farm, No. Andover, for collection of vegetables.

2.00. Second premium, to S. F. Newman, Newbury, for Savoy cabbage.

2.00. Second premium, to C. R. Anderson, Boxford, for Stone mason cabbage.
2.00. Second premium, to W. K. Cole, Boxford, for All Seasons cabbage.
2.00. Second premium, to M. H. Connor, West Newbury, for Fottlers Brunswick.
2.00. Second premium, to W. I. Chadwick, Boxford, for Red cabbage.
3.00. Second premium, to W. K. Cole, Boxford, for cauliflower.
2.00. Second premium, to W. K. Cole, Boxford, for cranberries.
1.00. Third premium, to N. Foster, No. Andover, for cranberries.
1.00. Gratuity, to J. W. Goodsell, Haverhill, for Hubbard squash.
1.00. Gratuity, to J. W. Goodsell, Haverhill, for marrow squash.
1.00. Gratuity, to C. R. Anderson, Boxford, for Edmunds beet.
1.00. Gratuity, to John H. George, Methuen, for Danvers onion.
1.00. Gratuity, to Cochickewick Farm, No. Andover, for late sweet corn.
1.00. Gratuity, to Homer Dow, Methuen, for Early Essex corn.
1.00. Gratuity, to H. M. Killam, Boxford, for cranberries.
1.00. Gratuity, to C. W. Webster, Haverhill, for Early Crosby corn.
.50. Gratuity, to T. C. Durkee, West Peabody, for mangel wurtzel.
.50. Gratuity, to Virgil Dow, Methuen, for parsnips.

L. H. Bailey, David Warren, J. Warren Moar, Harry W. Munroe, John J. Mason, Asa F. Lee—*Committee.*

GRAIN AND SEED.

The Committee on Grain and Seed have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$1.00. First premium, to C. F. Austin, Boxford, for Brockton pole beans.

1.00. First premium, to J. A. Andrew, Boxford, for white kidney beans.
1.00. First premium, to C. W. Webster, Haverhill, for peck of rye.
1.00. First premium, to Oscar Gowen, West Newbury, for buckwheat.
1.00. First premium, to Oscar Gowen, West Newbury, for cranberry pole beans.
1.00. First premium, to C. K. Ordway, West Newbury, for California beans.
2.00. Second premium, to D. M. Cole, Boxford, for yellow rice pop corn.
1.00. First premium, to William Thurlow, Boxford, for Goddard bush beans.
5.00. First premium, to H. M. Killam, Boxford, for field corn "angel of midnight."
3.00. Second premium, to J. W. Yeaton, Georgetown, for field corn "Pentucket."
2.00. Third premium, to J. C. Talton, West Newbury, for field corn "Longfellow."
3.00. First premium, to Edwin Bates, Lynn, for pop corn.
1.00. First premium, to L. W. Smith, West Newbury, for yellow eyed beans.
1.00. First premium, to H. M. Killam, Boxford, for peck shelled corn.
1.00. First premium, to C. W. Gowen, West Newbury, for horticultural bush beans.
1.00. First premium, to Eben Webster, Haverhill, for pea beans.
1.00. First premium, to D. H. Felton, Peabody, for peck barley.

Richard Webster, C. D. Ordway, George B. Austin—*Committee.*

COUNTERPANES AND AFGHANS.

The Committee on Counterpanes and Afghans have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$2.00. Gratuity, to Mrs. William Sumner, Newburyport, for counterpane.
2.00. Gratuity, to Annie F. Willis, Haverhill, for quilt.
2.00. Gratuity, to A. S. Folsom, Georgetown, for quilt.
1.00. Gratuity, to Mrs. A. G. Huse, Haverhill, for silk quilt.
1.50. Gratuity, to Mrs. S. M. Beach, Lawrence, for cotton quilt.
1.00. Gratuity, to Mrs. R. C. Harriman, Haverhill, for cotton quilt.
1.00. Gratuity, to Miss Lillie Ellis, Bradford, for velvet quilt.
1.00. Gratuity, to Mrs. Mary F. Willis, West Newbury, for silk quilt.
.75. Gratuity, to Mrs. William McKean, Salem, for cotton quilt.
.75. Gratuity, to Mrs. Geo. M. Paul, Haverhill, for cigar ribbon quilt.
.75. Gratuity, to Flora A. Danforth, Newburyport, for cigar ribbon quilt.
.75. Gratuity, to Mrs. Julia A. Cain, Lynn, for silk quilt.
.75. Gratuity, to L. H. C. Folsom, Georgetown, for afghan.
.75. Gratuity, to Mrs. C. W. Nutter, Haverhill, for afghan.
.50. Gratuity, to Mrs. J. H. Cate, Haverhill, for silk quilt.
.50. Gratuity, to E. L. Tewkesbury, Haverhill, for cotton quilt.
.50. Gratuity, to Mrs. J. H. Higgins, Newburyport, for cotton quilt.
.50. Gratuity, to Mrs. M. Harriman, Haverhill, for quilt.
.50. Gratuity, to Mrs. Otis Priest, Haverhill, for quilt.
.50. Gratuity, to Mrs. J. W. Bennett, Haverhill, for quilt.
.50. Gratuity, to J. E. Kimball, Haverhill, for silk quilt.
.50. Gratuity, to Mrs. Nathan Stanley, Newburyport, for cigar ribbon quilt.
.50. Gratuity, to Miss Bertha Wilson, Bradford, for leather quilt.
.50. Gratuity to Mrs. A. E. Leach, Haverhill, for cotton quilt.
.50. Gratuity, to Mrs. E. W. Killam, Boxford, for cotton quilt.
.50. Gratuity, to Mrs. M. H. Sands, Amesbury, for quilt.
.50. Gratuity, to Mrs. H. E. Carrew, Methuen, for quilt.

.50. Gratuity, to Mrs. Henry Hussey, Haverhill, for afghan.
.50. Gratuity, to Olive Coffin, Haverhill, for afghan.
.50. Gratuity, to Mrs. W. H. Spear, Haverhill, for afghan.
.50. Gratuity, to Mrs. E. W. Page, Amesbury, for silk quilt.
.50. Gratuity, to L. L. Phipps, Salem, for silk quilt.

Mrs. F. J. Bradley, Bessie M. Swan, Mrs. E. J. Burnham, Mrs. Richard Newell—*Committee.*

CARPETING AND RUGS.

The Committee on Carpeting and Rugs have attended to their duty, and respectfully report to the secretary that they have made the following awards:—

$4.00. First premium, to Mrs. Margie Nutter, Haverhill, for drawn rug.
2.00. Second premium, to Mrs. Addison Head, Haverhill, for drawn rug.
2.00. Gratuity, to Mrs. David Fernald, Haverhill, for collection of drawn rugs.
2.00. Gratuity, to Mrs. Moses E. Cook, Newburyport, for braided rug.
1.00. Gratuity, to Mrs. A. S. Folsom, Georgetown, for rug.
1.00. Gratuity, to Mrs. Thomas W. Quimby, Haverhill, for braided rug.
1.00. Gratuity, to Mrs. E. L. Withington, Newburyport, for collection silk rugs.
1.00. Gratuity, to Mrs. E. M. Pettingill, West Newbury, for knit silk rug.
1.00. Gratuity, to McGregor, Lawrence, for hand woven rug.
.75. Gratuity, to J. W. Frederick, Methuen, for drawn rug.
.75. Gratuity, to Edith Pinkham, Haverhill, for rug.
.75. Gratuity, to Mrs. R. C. Wood, Haverhill, for P. B. rug.
.75. Gratuity, to Carrie Webster, Haverhill, for button rug.
.50. Gratuity, to Annie T. Crowell, Haverhill, for drawn rug.
.50. Gratuity, to Mrs. Sarah E. Smith, West Newbury, for drawn rug.
.50. Gratuity, to Mrs. M. A. Sands, Amesbury, for drawn rug.

.50. Gratuity, to Mrs. Mary P. Chase, Newburyport, for drawn rug.

.50. Gratuity, to Mrs. James B. Shaw, Amesbury, for woolen rug.

.50. Gratuity, to Mrs. G. W. Wentworth, Haverhill, for knit rug.

.50. Gratuity, to A. M. Coffin, Haverhill, for drawn rug.

.50. Gratuity, to Mrs. Edwin West, Haverhill, for rug.

Mrs. Geo. C. Bradley, Mrs. Oliver Taylor, Mrs. Chas. W. Gowen, Mrs. S. F. Newman—*Committee.*

ARTICLES MANUFACTURED FROM LEATHER.

The Committee on Articles Manufactured from Leather have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$5.00. First premium, to F. G. Richards, Haverhill, for carriage harness.

2.00. First premium, to W. W. Bennett, Lynn, for pair of shoes.

Diploma to H. B. Goodrich & Co., Haverhill, for exhibit of shoes.

2.00. Gratuity, C. K. Fox, Haverhill, for collection of shoes.

5.00. Gratuity, to F. G. Richards, Haverhill, for collection of harnesses.

2.00. Gratuity, to J. J. Brimblecom, Haverhill, for display of shoes.

2.00. Gratuity, to Pentucket Shoe Co., Haverhill, for collection of shoes.

2.00. Gratuity, to F. S. & H. H. Gage, Haverhill, for exhibit of shoes.

2.00. Gratuity, to Burnham & McGregor, Haverhill, for exhibit of shoes.

2.00. Gratuity, to C. C. Fisher, Lawrence, for carved chair.

John Perkins, W. C. Allyn, Geo. W. Sargent, Frank J. Bradley, A. P. Jaques—*Committee.*

FANCY WORK.

The Committee on Fancy Work have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$3.00. Gratuity, to Mrs. F. Sweetser, Merrimac, for fancy work.
3.00. Gratuity, to Mrs. Bradley, Haverhill, for case fancy work.
3.00. Gratuity, to Mrs. A. Head, Methuen, for drawn work.
3.00. Gratuity, to Mrs. Beach, Lawrence, for drawn work.
3.00. Gratuity, to Miss West, Bradford, for doylies.
3.00. Gratuity, to Miss Franzbleau, Haverhill, for shawl.
2.00. Gratuity, to Mrs. Harry Emery, Haverhill, for doylies.
2.00. Gratuity, to Mrs. Nutter, Haverhill, for underwear.
2.00. Gratuity, to Mrs. Coffin, Newburyport, for scarf.
2.00. Gratuity, to Miss Richey, Haverhill, for table set.
1.00. Gratuity, to Miss Emma Bartlett, Haverhill, for lace.
1.00. Gratuity, to Miss Emma Bartlett, Haverhill, for lace.
1.00. Gratuity, to Edith Piper, Newburyport, for lace.
1.00. Gratuity, to Susie Eastman, Haverhill, for sofa pillow.
1.00. Gratuity, to Mrs. Hoyt, Haverhill, for scarf.
1.00. Gratuity, to Miss Durgin, Haverhill, for shawl.
1.00. Gratuity, to Miss Dickenson, Haverhill, for doylies.
1.00. Gratuity, to Mrs. Titcomb, West Newbury, for Mexican work.
1.00. Gratuity, to Mrs. Cooper, Methuen, for sham.
1.00. Gratuity, to Mrs. Goldthwaite, Groveland, for fancy work.
1.00. Gratuity, to Mrs. N. L. Sumner, Newburyport, for scarf.
1.00. Gratuity, to Miss Sawyer, Haverhill, for centre piece.
1.00. Gratuity, to Mrs. Harriman, Haverhill, for pillow shams.
1.00. Gratuity, to Mrs. Blunt, No. Andover, for table cover.
1.00. Gratuity, to Mrs. Bartlett, Salisbury, for table set.
1.00. Gratuity, to Mrs. Tewkesbury, Haverhill, for table set.
1.00. Gratuity, to Miss Edgerly, Haverhill, for lace.
.50. Gratuity, to Mrs. R. C. Wood, Haverhill, for mittens.
.50. Gratuity, to Mrs. Gale, Haverhill, for needlebook.
.50. Gratuity, to Mrs. Bryant, Haverhill, for tidy.

.50. Gratuity, to Mrs. Wharton, Haverhill, for tidy.
.50. Gratuity, to Mrs. Coffin, Haverhill, for box.
.50. Gratuity, to Mrs. Merrill, Haverhill, for apron.
.50. Gratuity, to Miss Clark, Newburyport, for point lace.
.50. Gratuity, to Miss Hoyt, Haverhill, for tray cloth.
.50. Gratuity, to Mrs. Tilton, Haverhill, for night dress.
.50. Gratuity, to Mrs. Ordway, Haverhill, for moss pictures.
.50. Gratuity, to V. V. Moulton, Boxford, for mittens.
.50. Gratuity, to Mrs. Fernald, Haverhill, for sofa pillow.
.50. Gratuity, to Mrs. Kneeland, Georgetown, for chair and sofa.
.50. Gratuity, to Mrs. Higgins, Newburyport, for fancy work.

Sarah Frances Franklin, Nellie A. Huntington, Mrs. F. G. Richards—*Committee.*

WORKS OF ART AND DECORATED CHINA.

The Committee on Works of Art have attended to their duty and respectfully report to the secretary that they have made the following awards:

$3.00. Gratuity, to Mrs. F. C. Naylor, Haverhill, for painting, "Kenosa Lake."
3.00. Gratuity, to Helen E. Carrew, Methuen, for painting, "Fruit."
3.00. Gratuity, to S. F. Franklin, Bradford, for painting, "House in Bradford."
3.00. Gratuity, to Gertrude Stanwood, West Newbury, for sketches.
3.00. Gratuity, to Gertrude Stanwood, West Newbury, for painting, "Study of Head."
3.00. Gratuity, to Gertrude Stanwood, West Newbury, for sketches.
3.00. Gratuity, to Miss H. F. Tenney, Georgetown, for painting, "Hut."
2.00. Gratuity, to Mabel Batchelder, Bradford, for painting, "Bull's Head."
2.00. Gratuity, to Sadie F. Franklin, Bradford, for painting, "Rocks Bridge."

2.00. Gratuity, to Gertrude Stanwood, West Newbury, for pen and ink sketches.
1.00. Gratuity, to Sadie F. Franklin, Bradford, for oil painting
1.00. Gratuity, to E. A. Page, Lynn, for "Interior of Fish house."
1.00. Gratuity, to Inez Tilton, Bradford, for "Still Life."
1.00. Gratuity, to Miss Bingham, Lawrence, for water color.
1.00. Gratuity, to Miss Bingham, Lawrence, for water color.
1.00. Gratuity, to Mrs. G. D. Tenney, Georgetown, for wood carving.
1.00. Gratuity, to Miss H. F. Tenney, Georgetown, for painting, "Strawberries."
3.00. Gratuity, to Mrs. Kimball, Bradford, for painted fish set.
3.00. Gratuity, to Miss Bingham, Lawrence, for painted lamp, jar, and tray.
2.00. Gratuity, to Mrs. Kimball, Bradford, for painted bowl.
2.00. Gratuity, to Miss Bingham, Lawrence, for fish set.
1.50. Gratuity, to Edith Piper, Newburyport, for jardiniere.
1.00. Gratuity, to Mrs. Nellie Reed, Beverly, for postage stamp plate.
.50. Gratuity, to Miss Julia Davis, Haverhill, for postage stamp plate.

The Committee regret their inability to give to Miss Ruth Farnsworth of Boston, only an honorable mention of her meritorious work, but according to the rules, a non-resident of the county cannot compete for a premium.

Alfred A. Ordway, John W. Tilton, Mrs. E. B. Bishop, Mrs. N. E. Ladd, Mrs. B. P. Hale—*Committee.*

CHILDREN'S WORK.

The Committee on Work by Children have attended to their duty, and respectfully report to the secretary that they have made the following awards:

$3.00. First premium, to Anna S. Longfellow, Byfield, for infant's dress.
2.00. Second premium, to Florence A. Mitchell, Bradford, for tray cloth.

1.00. Gratuity, to Emma Mason, Haverhill, for spread.
1.00. Gratuity, to R. D. Stevens, Lawrence, for decorated plates.
.75. Gratuity, to Charlotte S. Adams, No. Andover, for rug.
.75. Gratuity, to Lizzie W. Giddings, West Newbury, for patchwork quilt.
.50. Gratuity, to Lucy Killam, Boxford, for patchwork mat.
.50. Gratuity, to Gertrude and Cora Wilkins, Middleton, for afghan.
.50. Gratuity, to Gertrude Wilkins, Middleton, for fancy work.
.50. Gratuity, to Margaret Sargent, Bradford, for lace edging.
.50. Gratuity, to Eva M. Adams, Byfield, for apron.
.50. Gratuity, to Etta H. Hicks, Haverhill, for apron.
.50. Gratuity, to Wilfred R. Feeney, Haverhill, for patchwork quilt.
.50. Gratuity, to Julia Hosford, Haverhill, for painting.
.50. Gratuity, to Dorothy C. Fuller, Haverhill, for painting.
.50. Gratuity, to Dorothy C. Fuller, Haverhill, for painting.
.50. Gratuity, to Ethel C. Longfellow, Byfield, for charcoal sketch.
.25. Gratuity, to Millicent Barron, Haverhill, for decorated plates.
.25. Gratuity, to Julia Hosford, Haverhill, for candy.
.25. Gratuity, to Julia Hosford, Haverhill, for cake.
.25. Gratuity, to Gertrude Wilkins, Middleton, for canned pears.
.25. Gratuity, to Harry C. Wales, Bradford, for photographs.
.25. Gratuity, to Harriet Ingalls, Haverhill, for two mats.

Mrs. H. F. Longfellow, Mrs. Isaac C. Day, Mrs. Geo. L. Averill—*Committee.*

MANUFACTURES AND GENERAL MERCHANDISE.

The Committee on Manufactures and General Merchandise, have attended to their duty, and respectfully

report to the secretary that they have made the following awards:

$3.00. Gratuity, to Miss Agnes Brisselter, Haverhill, for case of hair work.

3.00. Gratuity, to C. W. Rhodes, Haverhill, for case of mdse.

2.00. Gratuity, to Jessie Fuller, Haverhill, for gloves and fancy work.

2.00. Gratuity, to Mrs. C. Furber, Haverhill, for corsets.

2.00. Gratuity, to Mrs. Hunting, Methuen, for corsets.

Warren C. Allyn, Chas. N. Hilton, J. A. Blake, W. J. Munroe—*Committee.*

GRANGE EXHIBIT.

$25. First premium, to Haverhill Grange, No. 154, for exhibit.

Sherman Nelson, Willard P. Smith, Mrs. David Warren, Albert H. Knight—*Committee.*

REPORT OF COMMITTEE ON ROOT CROPS.

The Committee on Root Crops report that the number of entries for premium this year was larger than might have been expected, considering the unfavorable season. The number of persons making entries in the various classes was nine, and the number of crops entered was fourteen. The crops were all visited by a part or all of the committee, and we wish here to acknowledge the courtesy with which we were received.

The committee were first called to visit the farm of Mr. Fred A. Russell, in Methuen, who entered crops of beets, parsnips, potatoes, squashes and cabbages, for premium. Mr. Russell's farm is largely intervale land, on the banks of the Merrimack river, between Lawrence and Haverhill, easily accessible to the markets of both cities. He is not a farmer "for fun," but rather for business, and his farm is a fine example of what can be done in Essex county by

the exercise of intelligence and enterprise. The crops were not fully grown when seen by the committee, but they promised well then, and his statements show how they turned out. The crop of beets entered by him were table beets for market, and not sugar beets, for which the Society offers a premium. It was a very fine crop, and the committee take the liberty of recommending the award of the first premium of ten dollars, if the trustees think it admissable, and if not, they recommend a gratuity of that amount. It seems as if it is quite as necessary for the Society to encourage the culture of table beets in this county as sugar beets, which are seldom raised, and whose value for sugar purposes, at least in this region, is more than doubtful.

Mr. Russell's experiment in raising potatoes possesses much interest, as showing the relative effect upon the crop, of stable manure and the commercial fertilizer he used. It was impossible to say which was best from the appearance of the potato tops, and the harvesting showed only a slight difference between them.

The same day the committee visited the onion crop of Mr. John H. George, also in Methuen. His onions were raised on a peat meadow, and the quality, as well as the quantity of the crop was exceptionally fine, the onions being of very uniform size and free from small ones. A noticeable point about his method of culture is the nearness of the rows, which he considers an advantage. The potato crop of Mr. C. H. E. Keilhan was on the peat meadow near the farm of Mr. George. The vines at that time were very luxuriant, and the crop turned out to be large ; not quite equal, however, to the crops of Mr. Russell and Mr. Longfellow, where more manure was used. Mr. J. H. Lunt of Newbury had a fine crop of onions, and the committee thought that the crops in the rows was quite equal to Mr. George's, but the rows were further apart, so that his crop on the half-acre was a little less.

The committee were invited to visit the farm of Mr. George F. Woodman of Newburyport, who had nearly five

acres of very handsome onions. He did not enter them for premium, but considering the size of the field, it is worthy of notice as a very remarkable crop.

Mr. Nathan Longfellow of Groveland next entered a crop of potatoes for premium, which was very excellent, and proved to be the largest crop brought to the notice of the committee.

We were next called upon to visit the farm of Mr. David Warren of Swampscott, well known to the farmers of this county as the producer of pure and reliable seed, to view his field of cabbage. They were very uniform in size, the yield heavy, and the quality of the heads could hardly be excelled. As they were intended for seed, they could not be measured or weighed, and it was not easy to decide whether he or Mr. Russell had the largest crop.

Mr. Charles C. Blunt of Andover entered a crop of parsnips and a crop of carrots for premium. Both crops were fine, and the parsnips especially good, Mr. Blunt, who has a reputation as a successful producer of that vegetable, saying it was the best crop he ever raised.

The committee next visited the farm of Mr. Daniel A. Carleton of North Andover, to see his crop of cabbages. They were the Brunswick variety, and evidently planted later than the crops of either of his competitors. The committee thought his crop, though a good one, not quite equal to either of the others.

Mr. M. H. Connors of West Newbury entered a crop of cabbages for premium, which was a very fine one indeed, but not quite equal to the exceptional crops of Mr. Russell and Mr. Warren. It is remarkable that in such an unfavorable year so many crops of the different kinds should have been entered for premium, which were almost all exceptionally large. Of course, while visiting these farms the committee had an opportunity to see other crops besides those offered for premium, and obtain an idea of their general management, and one or two points suggested themselves which are worth noting. The first is the prime

importance to the farmer of raising the best varieties of whatever crop he undertakes to produce. The difference in the results is very great under the same conditions. Even if the seed is pure and true to name, one variety of almost any vegetable or fruit may produce twice as much as another. New varieties are constantly being introduced, many of them of little value, perhaps, but some of them are superior, and it behooves the farmer to keep his eyes open and get the best. The writer of this once tried an experiment in raising potatoes which exactly illustrates the point. A tract of land was fertilized and prepared for planting, great care being taken that it should all receive the same treatment. It was then planted with half a dozen or more of the most popular varieties of potato then in cultivation, and all were treated alike.

The yield of each variety was carefully measured, and it was found that the crop ranged from less than two hundred bushels per acre to about four hundred. Of course quality, as well as quantity, must be taken into account, but we fancy that the financial success of the farmer depends more on the judicious selection of varieties than he often thinks. Another matter, in raising what are commonly known as "hoed crops," is the importance of having land that can be cultivated with the least possible manual labor. In these days of the improved tools and machinery which we see on our best managed farms, the farmer can hardly afford to cultivate land that requires the work to be all done by hand. Many of us can remember when the only tools used in cultivating "hoed crops" were the common cultivator, plough and hoe. We recall with disgust the hot June days when the plough, having been run once or twice between the rows of corn and potatoes, we labored painfully through the low rows, the weeds and grass as well grown as the crop,' and longed for the sun to go down. Now, as every one knows, most of the planting and cultivating can be done by machinery, provided the land is free from stones and not too hard and

rough. By the early use of the proper tools, the weeds are not allowed to get a start, and very little hand labor is required. It seems to us doubtful if the farmer nowadays can afford to cultivate ground where this cannot be done.

The statements which accompany this report show that, under proper conditions, the cultivation of the soil here in Essex county may be made profitable. To this end we take it that a principle necessity is to reduce the manual labor to the lowest point, and this requires land not too expensive to work. Much of the land in this county is rough and rocky, and should be devoted to other uses than tillage, but we believe there is enough that can be profitably occupied to satisfy the needs of our farmers for a long time to come.

The committee recommend the following awards:

CARROTS.

To Charles C. Blunt of Andover, first premium,	$10.00

PARSNIPS.

To Charles C. Blunt of Andover, first premium,	10.00
To Frederick A. Russell of Methuen, second premium,	5.00

BEETS.

To Frederick A. Russell of Methuen, gratuity,	10.00

ONIONS.

To John H. George of Methuen, first premium,	10.00
To J. H. Lunt of Newbury, second premium,	5.00

POTATOES.

To Nathan Longfellow of Groveland, first premium,	10.00
To Frederick A. Russell of Methuen, second premium,	5.00

CABBAGES.

To David Warren, Swampscott, first premium,	10.00
To Frederick A. Russell of Methuen, second premium,	5.00

SQUASHES.

To Frederick A. Russell of Methuen, first premium, 10.00

All of which is respectfully submitted.

JOS. S. HOWE,
WM. S. PHILLIPS, JR.
JOHN BARKER,
WM. BURKE LITTLE.
CHAS. W. ORDWAY.
} Committee.

STATEMENT OF A CROP OF CARROTS RAISED BY C. C. BLUNT OF ANDOVER.

Andover, Oct. 29, 1894.

To the Committee on Root Crops:

The land on which I raised the crop of carrots which I enter for premium is a light deep loam. The crop of 1892 was cabbage, well manured. The crop of 1893 was peas, manured with phosphate, at the rate of 800 lbs. per acre, followed with a crop of barley, ploughed deep in the fall. This spring ploughed twice, and (1500) fifteen hundred lbs. of bone phosphate sowed on the half-acre (no barn manure used); harrowed and smoothed with a drag; thickly sown on the 10th of June, at the rate of 3 lbs. to the acre. The seed came up well, and kept green and growing until digging time, with no blight.

COST OF CROP.

Preparation of land,	$4 50
1500 lbs. phosphate,	24 00
Hoeing, weeding and thinning,	18 00
Seed and sowing,	2 50
Harvesting,	11 50
	$60 50

VALUE OF CROP.

By 500 bushels carrots, at 50c.,	$250 00
Cost,	60 50
	$189 50

I value the crop at 50 cts. per bushel, as I am selling for that.

Respectfully submitted,

C. C. Blunt.

I hereby certify that I have measured a field of carrots for C. C. Blunt, entered for premium, and find it contains one-half acre.

Having measured the crop on the above piece, the yield is (500) five hundred bushels, 55 pounds to the bushel.

S. H. Bailey

STATEMENT OF A CROP OF PARSNIPS RAISED BY C. C. BLUNT OF ANDOVER.

Andover, Mass., Oct. 29, 1894.

To the Committee on Root Crops:

The land occupied by the crop of parsnips which I enter for premium is a dark loam, with gravelly subsoil.

The crop of 1892 was potatoes; the crop of 1891 carrots, manured at the rate of six cords per acre; land ploughed in the fall; in the spring stable manure, at (5) five cords per acre, and (800) eight hundred lbs. phosphate used on the half-acre. Harrowed and brushed, and four lbs. seed sowed on the 15th of April.

The crop came up well and was not affected by the drought.

COST OF CROP.

Preparation of land,	$4 50
Manure, 2 1-2 cords,	15 00
Phosphate,	12 80
Hoeing, weeding and thinning,	22 50
Seed and sowing,	5 00
Harvesting,	13 00
	$72 80

VALUE OF CROP.

By 380 bushels parsnips, at $1.00,	$380 00
Cost,	72 80
	$307 20

Respectfully submitted,

C. C. Blunt.

Andover, Oct. 29, 1894.

I hereby certify that I have measured a field of parsnips for C. C. Blunt, entered for premium, and find it contains one-half acre.

Having measured the crop on the above piece, the yield is (380) three hundred and eighty bushels, 55 pounds to the bushel.

S. H. Bailey.

STATEMENT OF A CROP OF PARSNIPS RAISED BY FREDERICK A. RUSSELL OF METHUEN.

The piece of parsnips which I enter for premium contains one-half acre. Previous to 1892 the land was in grass. In 1892 the crop was sweet corn. In 1893 the crop was early cabbage, followed by late Savoy cabbage. Early in April, 1894, I applied ten cords of horse stable manure broadcast, and ploughed eight inches deep. The soil was then thoroughly pulverized with a wheel harrow, smoothed with a Thomas smoothing harrow, rolled, and

seed sown with a seed drill in rows sixteen inches apart. They were hoed with Shove hoe four times and weeded twice. At the second weeding the plants were thinned to four inches apart in the row. They were hoed once with hand hoes. Commenced digging and marketing Sept. 10.

COST OF CROP.

Dr.

To 10 cords manure,	$40 00
To ploughing,	1 00
To harrowing and rolling,	1 00
To sowing,	60
To weeding and thinning,	10 00
To Shove hoeing,	3 00
To hand hoeing,	2 00
To harvesting,	26 20
	$83 80

Cr.

By 262 bush. parsnips, at 80 cents,	$209 60
Yield per acre, 524 bush, at 80 cents,	419 20
Cost per acre,	167 60
Profit per acre,	251 60

FREDERICK A. RUSSELL.

This certifies that I have measured the piece of land on which was raised 262 bushels of parsnips by Frederick A. Russell, and it contains one-half acre.

N. D. PERRY.

STATEMENT OF A CROP OF BEETS RAISED BY FREDERICK A. RUSSELL OF METHUEN.

The piece of beets which I enter for premium contains one-half acre. Previous to 1891 the land was in grass. In 1891 the land was ploughed, and twenty two-horse loads of barn cellar manure per acre applied broadcast.

Crop, potatoes. In 1892 manure from stables in the cities was applied broadcast, at the rate of fifteen cords per acre; also one ton of unleached ashes and one ton of coarse tankage per acre. Crop, early cabbage, followed by Hubbard squash. In 1893 twenty cords per acre of horse stable manure from the cities were applied broadcast. Crop, beets, followed by spinach and Savoy cabbage. In 1890 20 cords of horse stable manure from the cities were applied broadcast. Ploughed once at a depth of eight inches, harrowed with wheel harrow, then with Thomas smoothing harrow, and then rolled. Sowed to Edmands' beets, at the rate of ten pounds of seed per acre. A seed drill was used, and the rows were fifteen inches apart. The field was cultivated four times with Planet, Jr. hand wheel hoe.

COST OF CROP.

Dr.

To ploughing,	$1 00
To harrowing and rolling,	1 00
To 5 pounds seed,	2 00
To sowing,	60
To wheel hoeing four times,	3 00
To thinning and weeding,	15 50
To 10 cords manure,	40 00
	$72 10

Cr.

By greens,	$4 20
By 412 bush beets, at 45c.,	185 40
	$189 60
Yield per acre, 824 bush., at 45c.,	370 80
Yield per acre, greens,	8 40
	$379 20
Cost per acre,	144 20
Profit per acre,	235 00

FREDERICK A. RUSSELL.

This certifies that I have measured the piece of land on which was raised four hundred and twelve bushels of beets by Frederick A. Russell, and it contained one-half acre.

N. D. Perry.

STATEMENT CONCERNING A CROP OF ONIONS RAISED BY JOHN H. GEORGE, OF METHUEN.

The crop of 1892 was potatoes. The crop of 1893 was onions. The soil is peat meadow, ploughed in the fall of 1893, at which time there was a light dressing of coarse stable manure ploughed in. In the spring of '94 it was harrowed and brushed; 1000 lbs. of the Stockbridge onion manure was applied, brushed in, and the seed (Danvers Yellow Globe Onion) was sown. There were two pounds of seed put on the half-acre. There was put on one side of the piece one cord of as good manure as I had, for the purpose of testing the value of the fertilizer. The manure was put on at the rate of 15 cords per acre. The fertilizer was applied at the rate of one ton per acre. The fertilizer onions were by far the best as to quantity and quality. The maggots worked the most where the manure was; there were also double the weeds there.

I tried raising onions according to book theory, that is, by thinning them to four inches apart, and diminished the yield of my crop by at least 25 bushels by so doing, although I thinned but a small portion of them.

They were hoed five times, weeded three times, and left to mature. They cost the least to weed of any crop that I ever raised. They were not thoroughly weeded at all, as onion raisers usually weed them, that is, by stirring with the fingers the soil around them, but just gone through with and the scattering weeds pulled out.

They were cut out with a wheel hoe, picked up into crates at once, and stored in the onion house. The yield was 448 1-2 bushels of the finest onions I ever saw. They

were measured in the crates which the committee saw, 10 crates topped, and the lot reckoned by their shrinkage. I have been offered 80 cents per bushel, but prefer to hold them for advance.

The debit and credit account is as follows:

To ploughing,	$1 25
To harrowing and fertilizing,	75
To seed,	6 00
To sowing,	75
To hoeing five times,	3 75
To weeding three times, two boys three days,	5 50
To four cords coarse horse manure,	12 00
To one cord good manure,	5 00
To one-half ton Stockbridge onion fertilizer,	20 00
To harvesting and storing,	5 00
To topping and marketing, at 5 cents per bush.,	22 40
	$82 40

To Onion Crop, Credit.

By 448 1-2 bushels, at 80 cents,	$358 80
	82 40
Profit on half-acre,	$276 40
Profit per acre,	552 80

Respectfully submitted,

JOHN H. GEORGE.

METHUEN, MASS., Oct. 5th, 1894.

I hereby certify that I measured the land on which grew the crop of onions entered for premium by John H. George, and it contained one-half acre.

(Signed) WALTER SMITH.

STATEMENT OF ONION CROP RAISED ON ONE-HALF ACRE BY J. H. LUNT OF NEWBURY.

NEWBURY, MASS., Oct. 29, 1894.

The land was formerly in grass, and was planted with potatoes in 1891 and 1892. In 1893 it was sown with

onion seed. In 1894 it was again sown with onions, about three pounds of seed to the half-acre. Stable dressing was used, about five cords to the half-acre. 440 bushels 11 pounds of onions were gathered from this piece.

J. H. Lunt.

I hereby certify that I measured the above half-acre for Mr. Lunt.

Edwin P. Noyes.

STATEMENT OF A CROP OF POTATOES RAISED BY NATHAN LONGFELLOW OF GROVELAND.

The piece of potatoes which I enter for the Society's premium contains one-half acre. The crop of 1893 was hay, about one ton to the acre, no manure being used. The soil is a dark loam. A coat of 26 loads of manure to the acre was ploughed in, May 3d, 1894, five inches deep. It was then harrowed, marked and furrowed, the rows being three feet and six inches apart. It was planted May 7 with four bushels of Late Rose potatoes (part whole and part cut), placed about 18 inches apart, and received 150 lbs. of Bradley's potato manure in the drill. It was cultivated four times with horse and hoed twice by hand. The potatoes were dug about Sept. 25th, and the amount was 220 2-3 bushels. They are stored in the cellar, to be sold later in the season.

Financial Statement—Cost per Acre.

Ploughing,	$3 00
26 loads manure,	52 00
300 lbs. Bradley's Potato Manure,	5 25
Harrowing, marking and furrowing,	1 75
8 bushels potatoes,	6 00
Planting,	4 00
Cultivating and hoeing,	5 00
Applying Paris green,	3 00
Digging and storing,	15 00
	$95 00

Yield per Acre.

407 bushels large potatoes, 34 bushels small potatoes.

Respectfully submitted,

NATHAN LONGFELLOW.

This is to certify that I have measured the land belonging to N. Longfellow, on which grew the potatoes which he has entered for premium, and it contains 80 rods.

W. K. COLBY.

Groveland, Oct. 29, 1894.

STATEMENT OF A CROP OF POTATOES RAISED BY FREDERICK A. RUSSELL, OF METHUEN, SEASON OF 1894.

To the Committee on Root Crops:

The piece of potatoes which I enter for premium contains one-half acre. Previous to 1893 the land had been in grass for four years. In 1893 the land was broken up, a liberal dressing of manure applied. Crop, cabbage. Rate of production four hundred and fifty barrels per acre. After harvesting the cabbage in the autumn of 1893, the ground was ploughed about seven inches deep.

About May 1, 1894, one-fourth acre received an application of three and three-fourths cords of barn-cellar manure, which was spread broadcast, and ploughed in, seven inches deep. The remaining one-fourth acre had a dressing of five hundred pounds of Bradley's potato and vegetable manure. Three hundred and seventy-five pounds were sowed broadcast and one hundred and twenty-five pounds were put in the drill. With the exception of different fertilizers the two parts of the field received the same attention throughout the season. The ground was harrowed with a wheel harrow and planted with an Aspinwall potato planter. The rows were two feet nine inches apart, and seed was placed ten inches apart in the row. Variety, New Queen. Quantity of seed per acre thirteen bushels.

The potatoes were harrowed twice with Thomas smooth-

ing harrow, cultivated twice, hoed once with hand hoes, and twice with horse hoe.

Paris Green was applied three times, with a Cyclone machine. Potatoes were harvested Oct. 16. The quarter-acre which was dressed with barn-cellar manure, produced one hundred and seven bushels of potatoes. The quarter-acre which was fertilized with Bradley's potato and vegetable manure, produced ninety-nine bushels.

COST OF CROP.

To 3¼ cords Manure for ¼ acre,	$22 50
" ploughing,	1 00
" harrowing,	75
" seed,	2 76
" planting,	38
" cultivating,	50
" hoeing by hand,	87
" hoeing by horse hoe,	50
" Paris Green and applying,	66
" harvesting,	3 71
	$33 63
To 500 lbs. Bradley's potato and veg. manure,	9 50
" plowing,	1 00
" harrowing,	75
" seed,	2 76
" planting,	38
" cultivating,	50
" hoeing by hand,	87
" hoeing by horse hoe,	50
" Paris Green and applying,	66
" harvesting,	3 71
	$20 63

By 107 bushels potatoes at 70c.,	$74 90
" 99 bushels potatoes at 70c.,	69 30
Yield per ½ acre 206 bush. at 70c.,	$144 20
Cost " " "	54 26
Profit " " "	89 94

FREDERICK A. RUSSELL.

This certifies that I have measured the piece of land on which was raised two hundred and six bushels of potatoes, by Frederick A. Russell, and it contains one-half acre.

N. D. PERRY.

STATEMENT OF A CROP OF CABBAGE RAISED BY DAVID WARREN, OF SWAMPSCOTT.

To the Committee on Root Crops:

The crop of Stone Mason cabbage, which I enter for premium, was grown on land that had been in grass some six or seven years previous, no fertilizer or manure had been used on it, during that time. The soil is a dark loam with gravelly sub-soil, ploughed in May, about seven inches deep, stable manure applied by going over twice with Kemp's Spreader, using about eight cords to the acre. Wheel harrowed in with Randall harrow, then dragged. Seed sown with seed sower the eleventh day of June, the rows three feet two inches, and hills two feet apart, using about a pound of seed to the acre. Cultivated twice, taking about three hours each time with man and horse. Hoed twice, no expense for thinning, as the plants were used by myself and neighbors.

COST PER ACRE.

Ploughing and preparing land,	$7 50
Manure and teaming from town,	40 00
Seed and sowing,	4 00
Cultivating twice,	3 00
Hoeing twice,	6 00
Cost of harvesting,	10 00
	$70 50

Respectfully submitted,
DAVID WARREN.

NOTE. I cannot estimate the value of the cabbages, as I use them for seed, and are therefore of more value to me, than for market.

This is to certify that I have measured a piece of land for David Warren, containing one-half acre, and find, by counting some rows, and estimating from them, that there are about 3000 saleable cabbage on the half acre.

WILLARD F. LEWIS.

STATEMENT OF A CROP OF CABBAGE, RAISED BY FREDERICK A. RUSSELL, OF METHUEN, SEASON OF 1894.

The Committee on Root Crops :

The piece of late cabbage which I enter for premium, contains one-half acre. In 1892 the land was sowed to parsnips. About fifteen cords of manure per acre were used. In 1893 the crops were parsnips and cucumbers. Treatment about the same as in 1892. In 1894 five loads of stable manure were drawn from the city, on sled, in the month of February, and spread broadcast on the snow. June 14, the land was plowed, and nine hundred pounds of Bradley's potato and vegetable manure, applied broadcast and harrowed in. June 15, the land was marked in rows three feet apart, with an Aspinwall potato planter and three hundred pounds of Bradley's potato and vegetable manure applied in the drill.

The same day it was planted by hand, with one-half pound Stone Mason cabbage seed, in hills two and one-half feet apart. Eight days after planting, the cabbage were cultivated and hoed. The field has been cultivated four times, and hoed three times during the season.

COST OF CROP.

To 5 cords manure at $2.50.	$12 50
" plowing,	1 00
" harrowing and rolling,	1 00
" sowing fertilizer,	50
" marking and drilling fertilizer,	50
" ½ pound seed,	2 00
" planting,	75
" cultivating and hoeing,	6 00
" thinning and filling in,	1 50
" 1200 pounds fertilizer,	22 80
	$48 55
By 1600 plants,	$4 80
" 372 barrels cabbage at 65c.,	241 80
	$246 60
Yield per acre 744 barrels at 65c.,	482 60
" " " 3200 plants,	9 60
Cost " "	97 10
Profit " "	395 10

FREDERICK A. RUSSELL.

This certifies that I have measured the piece of land on which was raised three hundred and seventy-two barrels of cabbage, by Frederick A. Russell, and it contains one-half acre.

N. D. PERRY.

STATEMENT OF A CROP OF SQUASH RAISED BY FREDERICK A. RUSSELL, OF METHUEN, SEASON OF 1894.

To the Committee on Root Crops:

The piece of Hubbard squash which I enter for premium, contains three acres. For four years previous to 1893, the land was in grass. In the spring of 1893, the ground was plowed seven inches deep, and sixty-seven cart loads of barn cellar manure, were applied broadcast, wheel harrowed in, and the piece planted to sweet corn. In the spring of 1894 sixty cords of well rotted horse manure were applied broadcast, also, thirty-four loads of night soil from the city, and field plowed seven inches deep, and harrowed with Thomas smoothing harrow.

For the first crop, one acre of the piece was planted to peas, and the remaining two acres were set to early cabbage leaving every fourth row for squash. The squash was planted June 7. The peas were cleared from the field July 14, and the cabbage were nearly all removed by Aug. 1.

The squash were hoed twice before the other crops were removed, and once afterward. They received no further care until harvesting, which was commenced Sept. 25. They are stored in the squash house for winter sale.

COST OF CROP.

To 60 cords manure at $6,	$360 00
" 34 loads night soil at $2,	68 00
" plowing,	6 00
" harrowing,	4 00
" hoeing,	22 50
" cultivating,	19 50
	$480 00
One-half the expense charged to peas and cabbage, and one-half charged to squash, gives,	$240 00
9 pounds seed,	9 00
Planting,	2 00
Harvesting and storing,	18 75
	$269 75

By 61,580 pounds squash in house.

Cost per ton, $8 80

FREDERICK A. RUSSELL.

This certifies that I have measured the piece of land on which was raised 61,580 pounds of squash, by Frederick A. Russell, and it contained three acres.

N. D. PERRY.

REPORT OF COMMITTEE ON SMALL FRUITS.

To the Trustees of the Essex Agricultural Society:

The Committee selected to visit and examine the small fruit crops, entered for premium, respectfully submit the following report.

Six entries claimed our attention, namely—J. Henry Nason, West Boxford, strawberries; W. K. Cole, West Boxford, strawberries; Oscar Gowen, West Newbury, strawberries; W. K. Cole, West Boxford, raspberries; Amos Haseltine, Haverhill, blackberries; Amos Haseltine, Haverhill, currants.

June 27th, we examined the strawberry crops. This was rather late in the season for Mr. Nason's and Mr. Cole's, although at the former place, while some of the varieties were nearly all picked, his Bubachs and Haverlands were a sight that well paid us for our visit. The ground was literally red with berries, especially was this the case with the Haverlands, the dry season being very favorable for this variety. Mr. Nason's whole crop gave evidence, that although being comparatively young in the business, he understands how to grow this most excellent of all small fruits to perfection.

At Mr. Cole's we found that his vines, Lovett's Early, had been entirely stripped of the fruit, so that we could not of course judge of his crop. We noticed that a portion of his plot had been severely injured by the drought; notwithstanding this, he reports a very good showing, which

establishes the fact that Lovett's Early is a very profitable variety to cultivate.

From West Boxford, we went to Mr. Gowen's, at West Newbury. Here we found that instead of being too late we were actually too early to inspect the field. He had but just completed his second picking, which left scarcely any ripe fruit, but the vines, which were very luxuriant and healthy, were heavily loaded with green berries.

Thus the Committee were obliged to acknowledge that the statements alone would decide the premium, in other words we have visited some of the best crops of strawberries ever produced in Essex County, without being able to even guess which would be the premium one. The cultivation of Mr. Gowen's plot was as near perfection as is often seen under the matted row system, alley ways were well mulched, rows straight, and the whole field free from weeds.

It will be noticed in his report, that in 1891 the crop was strawberries; this fact is in direct opposition to the experience of the committee and many other growers of this fruit. Although the writer has been in the business over thirty years, he has never succeeded with a second crop so soon after a preceding one.

As a rule the strawberry takes some substance from the soil, which we have not yet learned to replace, a substance which requires at least six to ten years for Nature to renew.

Mr. Gowen's crop is an exception to this rule.

The Committee regret that the Society does not offer a second premium, as is the case with root and grain crops. In answer to the question, which variety is the most profitable? two of the competitors say Bubach No. 5, and that of the newer varieties, the Beverly is of the best quality, and sells at the highest price.

While at Mr. Cole's we examined his raspberries, which appeared very thrifty, and promised a good crop.

July 25th, the Committee were called to Ayers Village, Haverhill, by Mr. Haseltine, to inspect his crops of black-

berries and currants. His whole farm as well as his entered specialties shows that he practices thoroughness in everything he undertakes. Although he does not figure a profit on his currants and blackberries, for the first years of their bearing, he is confident of a good income later on. The Committee believe that Mr. Haseltine's statements are very valuable, and do not hesitate to propose that he be awarded the premiums offered by the Society. Your Committee therefore recommend the following awards :—

To J. Henry Nason, West Boxford, crop of strawberries, first premium, . $10.00

To W. K. Cole, West Boxford, crop of raspberries, first premium, $10.00

To Amos Haseltine, Haverhill, crop of currants, first premium, $10.00

To Amos Haseltine, Haverhill, crop of blackberries, first premium, $10.00

B. F. Huntington, Wm. Thornton, W. H. Hayes—*Committee.*

REPORT OF A CROP OF STRAWBERRIES RAISED BY J. HENRY NASON, OF WEST BOXFORD.

This piece of land that I enter for a crop of strawberries, contains twenty rods, measured by D. M. Cole, of West Boxford. The crop in 1892 was potatoes. Ploughed in the spring of 1893 and harrowed and applied phosphate. The piece was set to the following varieties, Haverland, Sharpless, Bubach, Jessie and Leader. They were set four feet in rows, and about fourteen inches in the row, I used Bradley's phosphate and made three applications in the season. Commenced picking, June 13, and picked the last, July 11.

		Cr.
4000 plants at $3.00 a thousand,		$12 00
1400 boxes of berries at 13 cts,		182 00
		$194 00
	Dr.	
Ploughing ground,	75	
Setting plants,	1 00	
Phosphate,	4 50	
Cultivating and weeding,	6 00	
Thatch for covering,	3 00	
Picking 1400 boxes at 1½ cts,	21 00	
Marketing,	14 00	
		$50 25
Net profit on crop,		143 70
Rate per acre:		
11200 boxes,		1456 00
Cost,		402 00
Net profit,		$1054 00

Respectfully submitted,

J. Henry Nason.

I hereby certify that I measured the land on which was raised the crop of strawberries entered by J. Henry Nason for premium, and find it contains one eighth of an acre.

D. M. Cole.

STATEMENT OF RASPBERRY CROP RAISED BY W. K. COLE, OF WEST BOXFORD.

The raspberry crop entered by me for Society's premium grew on bushes which have been in bearing several years, on land of light loam. The variety, I think, is "Philadelphia," The only labor expended upon them the past year has been, cultivating twice in the spring, and thinning the

new canes and cutting out the old ones. Applied in April, 80 lbs. of fine ground bone, and 50 lbs. of muriate of potash. The yield was 710 pint boxes of berries, which sold for $62.72.

		Dr.
To 3 day's labor at $1.25,		$3 75
" cultivating,		50
" 80 pounds bone,		1 12
" 50 pounds M. Potash,		1 13
" picking 710 boxes berries at 1½ cents,		10 65
" marketing 710 boxes berries at 1 cent,		7 10
		$24 25
	Cr.	
By 710 boxes berries,	$62 72	
	24 25	
Net profit,	$38 47	
" " per acre,		$272 00
Gross receipts per acre,		$436 80

Respectfully submitted,

W. K. Cole.

I hereby certify that I measured the Raspberry bed entered for premium by W. K. Cole, and it contains twenty rods, one hundred and eighty-four feet.

H. M. Killam.

STATEMENT OF A CROP OF CURRANTS RAISED BY AMOS HASELTINE, OF HAVERHILL.

The twenty-seventh and nine-tenths square rods of land, is of good quality, and has been used for several crops of onions. In 1892, 700 Victoria, Fay, Cherry and White Grape currants, were set in rows five feet apart, and two feet apart in the rows.

Each year about one cord of stable manure was spread and cultivated into the surface, and in 1892, four rows of onions were grown between the rows.

In 1893 two rows were grown, and in 1894 one row of parsnips, beets, turnips, lettuce and radishes, and the labor and manure charged accordingly. The crop of 1894 was not more than one-half a fair crop, on account of the severe frost, which killed all blossoms and fruit that were not protected by leaves.

1892. CURRANTS.	*Dr.*
700 two years old bushes,	$17 25
Preparing land and setting,	7 50
Manure,	4 00
Use of land,	2 00
Hoeing five times,	5 25
	$36 00
1893, *Dr.*	
Interest,	$2 16
Manure,	4 00
Use of land,	2 00
Pruning and killing currant worms,	2 00
Cultivating and hoeing,	4 54
Picking and selling 120 quarts at 4 cents,	4 80
	$55 50
Cr. By 120 quarts at 10 cents,	12 00
	$43 50
1894, *Dr.*	
Interest,	2 61
Manure,	5 00
Use of land,	2 00
Hoeing five times,	5 00
Destroying currant worms,	4 49
Picking and selling 610 quarts at 4 cents,	24 40
	$87 00

Cr.	By 610 quarts at 8 to 10 cents,	53 00
Dr.	To balance of expense,	$34 00

Crop per acre:

3498 quarts currants Dr. per acre, $194 97

The above statement is respectfully submitted,

AMOS HASELTINE.

HAVERHILL, MASS., Aug. 3, 1894.

This is to certify that I have measured the land on which grew the crop of currants entered for premium, by Amos Haseltine, and find it to contain 27.9 square rods.

E. A. EMERSON.

STATEMENT CONCERNING A CROP OF BLACKBERRIES, RAISED BY AMOS HASELTINE, OF HAVERHILL.

The twenty-two and one-fifth square rods of land, on which the blackberry crop grew, which I enter for premium, was a piece of worn-out pasture, partly covered with gray birches, a light soil and somewhat dry. The birches were dug out, and the land plowed in 1890, and planted with potatoes, using fertilizer broadcast and in the drill.

In 1891, a light coat of manure was plowed under, fertilizer put in the drills and again planted with potatoes.

In 1892, it was again manured and plowed under, and 400 Snyder blackberry plants were set in rows, seven feet apart, and from one to three feet apart in the rows, according to strength of the plant, and one row of potatoes was planted between each row of blackberries.

In 1893, they were pruned three times, cultivated, hoed and weeded, staked and side-wired.

In 1894 they were pruned in the spring, and cross-wired about one cross-wire to a rod, to keep them from spreading, leaving the rows from two to three feet wide. After blossoming, all canes that were barren were cut out; and before picking, the sprouts in the paths were cut, and the new

canes which grew near the outside wires, in the paths. were tied or wired to the outside wires of the rows, in order to have the paths clear and open, and also save the new canes for next year's crop.

The crop was not a full one on account of the severe drouth, which began to dry the berries and canes about the middle of August, and only sixty-five quarts were picked after the twentieth of that month, in marked contrast with some past years, when they have lasted up to Sept. 10th. One other reason for lack of profit is the price per quart, which was two cents less than last year. But in crops of currants, gooseberries, raspberries and blackberries, to find the profit, the expense should be reckoned from the first planting of the bushes, as some years the crop will fail, on account of frost or some other cause.

1892. BLACKBERRIES.	*Dr.*
To 400 plants at 2½ cents,	$10 00
Preparing land and setting plants,	6 50
Manure,	5 00
Cultivating and hoeing,	7 00
Use of land,	1 50
	$30 00
1893, *Dr.*	
Interest on expense,	$1 80
Use of land,	1 50
Fertilizer,	3 00
Cultivating, hoeing and weeding,	7 20
Training and pruning,	4 50
Wire, posts and stakes,	7 50
Work setting posts and wiring,	3 50
Picking, selling and boxes, 150 quarts at 4½ cts,	6 75
Total expense,	$65 75
Cr. By 150 quarts at 12½ cents,	18 75
To balance,	$47 00

1894, *Dr.*

Interest,	2 82
Use of land,	1 50
Fertilizer and muriate of potash,	4 18
Pruning and tying first time,	4 25
Cross-wiring,	1 25
Pruning second time,	1 00
Hoeing and weeding,	2 00
Pruning and tying to wires,	2 00
Picking, selling and boxes, 900 qts. at 4½ cts,	40 50
Total expense,	$106 50
Cr. By 900 quarts at 10½ cents,	94 50
Dr. To balance,	$12 00

Crop per acre:

6486 quarts blackberries Dr. per acre, $86 49

The above statement is respectfully submitted,

AMOS HASELTINE.

HAVERHILL, MASS., Aug. 3, 1894.

This is to certify that I have measured the land on which grew the crop of blackberries, entered for premium, by Amos Haseltine, and find it to contain twenty-two and one-fifth square rods (22 1-5.)

E. A. EMERSON.

GRAIN CROPS.

The Committee on Grain Crops have attended to their duty, and respectfully report to the secretary that they would recommend the following premiums:

$10. First premium, to Nathan Longfellow, Groveland, for crop of corn.

$5. Second premium, to Fred Stultz, West Newbury, for crop of corn.

$10. First premium, to C. C. Blunt, Andover, for crop of rye.

C. W. Nelson, M. H. Connor, John Barker—*Committee.*

STATEMENT OF CROP OF CORN RAISED BY NATHAN LONGFELLOW, OF GROVELAND.

The piece of corn I enter for your consideration, contains one acre and ninety-three and one-half rods. The crop of 1893 was grass, yield about one ton to the acre, no manure being used. The soil is a slaty loam. It was ploughed May 16, and received a coat of twenty-six loads of manure to the acre, ploughed in. It was then harrowed, marked and furrowed, and planted May 16, with ten quarts of corn per acre. The hills were three and one-half feet apart each way, and five kernels of corn were planted in each hill, 200 lbs. of Bradley's X L Superphosphate to the acre was used in the hills. It was cultivated three times, each way with horse and hoed twice by hand.

It was gathered and husked Oct. 15th to 20th, and the amount of ears was 12,560 lbs. or 7927 lbs. to the acre. The corn is very ripe and dry, and at the present time 69 lbs. of ears shelled, gives 56 lbs. of corn, and 13 lbs. of cobs. There is the usual amount of stover estimated at three tons per acre.

COST PER ACRE.

Ploughing,	$3 00
Harrowing, marking and furrowing,	1 75
Planting and seed,	3 50
Cultivating and hoeing,	5 00
Husking,	10 00
Value of manure,	52 00
Value of fertilizer,	3 50
	$78 75

Respectfully submitted,

NATHAN LONGFELLOW.

GROVELAND, Oct. 29, 1894.

This is to certify that I have measured the land belonging to Nathan Longfellow, on which grew the corn which he has entered for premium, and it contains 253½ rods.

W. K. COLBY.

STATEMENT CONCERNING A CROP OF CORN, RAISED BY FREDERICK STULTZ, OF WEST NEWBURY.

This corn was raised on land that in 1892 was in grass, and badly run out. In 1893 the crop was corn, manured with six cords manure. When I cut the corn in 1893, the land was green with dog-grass that had been seeding in for years, and I was obliged to plough and harrow in the fall, to kill this.

In the spring of 1894 I spread seven cords of manure broadcast, and ploughed it under, about four inches deep, and harrowed. Both ploughings, so far, were to kill the dog-grass, and I do not reckon them in the cost of raising the corn. On the 11th of May, I ploughed the land eight inches deep, harrowed with a spring tooth harrow, and planted by hand, May 12th, 10 quarts of seed of my own raising, in drills 3 feet, 4 inches apart, and seven inches apart in the row.

There was scarcely a blade of dog-grass to be seen in the fall of '94.

Corn was harvested the last week in October.

I had eighty-two bushels shelled corn on the acre.

COST OF CROP PER ACRE.

	Cr.
Top stalks,	$15 00
82 bushels of shelled corn,	57 40
Stover,	12 00
Two-thirds manure in land,	23 30
	$107 70

	Dr.	
Seven cords of manure,	$35 00	
Spreading manure,	1 00	
Ploughing,	3 00	
Harrowing,	2 00	
Fertilizer (Bowkers,)	3 00	
Seed and planting,	2 00	
Hoeing and cultivating,	6 00	
Harvesting tops,	4 00	
Cutting and carting to barn,	4 00	
Husking,	4 00	
		$64 00
Profit on the acre,		$43 70

Respectfully submitted,

FREDERICK STULTZ.

This is to certify that the above statement is correct, and the land contains one acre.

SILAS E. HICKS.

STATEMENT OF CROP OF RYE, RAISED BY C. C. BLUNT, OF ANDOVER.

The piece of land that I raised the crop of rye that I enter for premium, was in 1892 in grass, was plowed late in the season, in the spring of 1893, was cross plowed, and about five cords stable manure, well harrowed in, and five hundred pounds of Potato Fertilizer, and planted with potatoes. A good crop was harvested. The soil is light loam. The piece was then well harrowed, not plowed again, or any manure or fertilizer used on the rye. One bushel and one half (1½) was sowed and brushed in.

COST OF CROP.

Seed and sowing,	$1 75
Harrowing,	1 00
Mowing and binding,	3 00
Carting,	1 50
Threshing and cleaning,	5 00
	$12 25

VALUE OF CROP.

21½ bushels of rye,	$21 50
4200 lbs. straw,	31 40
	$52 90
	12 25
Profit per acre,	$40 65

Respectfully submitted,

C. C. BLUNT.

ANDOVER, MASS., Oct. 26, 1894.

I hereby certify that I measured the land, and noted the weight of the crop of rye that was raised in Andover, Mass., this year, 1894, on the farm of Chas. C. Blunt, and that the land measured one acre, and the rye grain that grew thereon, was 21½ bushels, at 56 lbs. to the bushel, and the straw was 4200 lbs.

SAMUEL THAYER.

REPORT OF DELEGATE FROM STATE BOARD OF AGRICULTURE.

The seventy-third annual cattle show and fair of the Essex Agricultural Society, was held in the city of Haverhill, on Sept. 19, 20 and 21, 1893. Your delegate arrived in the city on the afternoon of the first day. We went direct to City Hall where we found a large display,

not only of the produce of the garden, the orchard, and the farm, but also of the varied manufactures of the county, specimens of works of art, fancy needle work, pictures, articles rare and costly, some of great utility, others, rare and rich in historic interest, and all being so skillfully arranged as to make it most attractive to the eye, and ever to be remembered as a scene of beauty. Later in the day, we took the electric cars, and following the windings of the beautiful Merrimac, visited Riverside Park, where we found under large tents and in open pens, the cattle, horses, and farm implements and machinery upon exhibition. The show in this department we considered very good, much better than we expected, and truly we felt to congratulate the dumb animals on exhibition, as well as their owners, on the favorable weather enjoyed, for had it been a severe storm, it would have been tedious indeed for all the live stock to have stood out in the long hours, and faced the elements. In the evening we returned to the hall for a more thorough inspection. We found it crowded, showing that the citizens of Haverhill appreciated the excellence of the display. The show of flowers we never have seen equalled at any county fair; the contributors represented nearly all parts of the county, but the most attractive of all was the flower pyramid, contributed by the Danvers Asylum.

It was unique in design, and of most magnificent workmanship. It stood fully eight feet high, and in its make-up was represented almost every variety of flowers known to our season and clime. It had four faces. On one was represented an American Shield, on another a Bull's Head, and Essex Agricultural Society, on another a Plough, while on the fourth was a cross with the words, Danvers Hospital. The whole was crowned with gladiolus, while around the base was a shelf upon which was most attractively arranged every variety of farm product grown upon the extensive grounds of the Asylum. This rare exhibition was designed and executed by Mr. Ettore Tassinari, the

Italian florist of the Asylum. It lingers in our memory as a beautiful creation.

Haverhill Grange made a very fine and creditable exhibit and received the first prize, $25.00.

Also we were pleased to notice the Haverhill shoe exhibit as well as the hat industry of the same city. Among the numerous exhibits of rare interest, was a set of tools 150 years old, shown by Mr. Griffin, of North Andover. Did space permit we should be pleased to make special mention of a number of exhibits in the art department, but we must close this part of our report, only saying that on our third and final visit to the hall, we left with reluctant steps, wishing that the poor children of the city and surrounding towns might have had a day "After the Fair," when they could have been admitted free, and beheld this array of beauty, thus creating standards of excellence in their young minds, that might be of untold benefits in after years.

On the morning of the second day, we attended the annual meeting of the Society. We were pleased to note the harmony, unanimity and good feeling manifest in all the measures considered, and the deep interest evinced for the prosperity of the organization. In an able address delivered by the President, many matters of interest were brought to the attention of the Society, but in the estimation of your delegate, none more vital than the question of permanent location. For nearly three quarters of a century this society has traversed the length and breadth of Essex County with no "abiding city." This method may have its advantages, but we believe it to be contrary to the experience of the larger number of agricultural societies where permanent homes have been secured. We are happy to learn that there is a growing sentiment in the society towards a radical change in the near future.

After the meeting we made another visit to the Park, where we found increased numbers of horses and cattle, some very fine specimens of most of the leading breeds.

We were compelled to leave on the afternoon of the

second day, and thus forego the pleasure of being present at the annual dinner, which we learn from report was a grand success. We came away from Haverhill with most pleasant impressions, our visit was made doubly enjoyable on account of the many kind attentions and courtesies shown, not only by the officers of the society, but many of the citizens as well. And we can truly say that the recollections of our visit will ever be one of the green spots in our memories.

Respectfully submitted,

ELBRIDGE CUSHMAN.

Nov. 6, 1893.

FARMERS' INSTITUTES.

The Society held four Institutes during the past year on as many different days, forenoon and afternoon, at which the following subjects were opened by carefully prepared essays, and freely discussed by any and all present, viz :

1. "Rural Hygiene and Sewage Disposal."
2. "Cooking."
3. "The Dairy Cow and How to Feed Her."
4. "The State Board of Agriculture and what it has done for Farmers."
5. "Small Fruits."
6. "State Roads and Highways in general."
7. "Dairy Work in general."
8. "Ensilage in connection with Dairy Farming."

The 94th Institute and first of the season was held in the Peabody Institute, Danvers, Friday, Jan. 5, 1894, and notwithstanding the dull, rainy day, there was a good attendance. President Appleton called the meeting to order, and after making some interesting remarks, introduced Dr. Charles W. Page, Supt. of the Danvers Lunatic Hospital, as the principal speaker of the morning, who took for his subject, "Rural Hygiene and Sewage Disposal."

The speaker began by saying that hygiene is the science and art of preserving health. From the earliest times men have been impressed with the necessity of good sanitary conditions. The old Mosaic and Roman laws, and ruins of public aqueducts, drains and sewers, in ancient Rome, gave evidence that the conviction had been forced upon men that neglected conditions of cleanliness resulted in suffering, disease and death.

Not until within 75 years has there been practical advance in this line. He referred to the purification of water, and said it would be sinning against light if a revolution does not take place in the care and management of personal and household waste.

Dr. Page urged the farmers of the county to make a study of microbe organism, and take advantage of the information concerning germs and their products, which are so essential to success in every farm operation. During the past twenty years, physicians have learned much about, and put an entirely new construction upon, the theory of disease, methods of treatment and means of prevention. In like manner the science of agriculture is advanced. Farmers should be fully informed of the operations of bacteria both benignant and helpful; should know that form which is recognized as fermentation, and be forewarned of financial losses and physical disorders. Bacteria exists everywhere, and unless scientific precautions are taken, they find access to all organic matter. Methods of preparing and preserving food are determined by the laws of germ development and activity. Scalding milk and fruit destroys the germs which naturally cause fermentation and chemical changes. Germs in drinking water are scalded to death by boiling the water. There are vegetable germs, however, which have certain functions to perform, and when their activities are restricted to the right place they are man's best friend. It was found to be an established fact that oxidation of organic matter was the natural work of living bacteria in the soil, which caused

first the carbon and hydrogen, and then the nitrogen to combine with oxygen.

In ground well tilled so as to admit air to considerable depth, with warm sunshine alternating with showers, the nitrifying microbes are most active beneath the surface, manufacturing plant food, and a fine growing season is the result.

He concluded by giving a scientific and practical talk upon sewage disposal, based upon knowledge of bacteriology, and asked: Is it not probable that man will, sooner or later, discard present elaborate engineering schemes of sewerage, and, taking lessons from nature's method, humbly return to a more simple and primitive, but inexpensive and health insuring practice, and quickly bury all organic, putrescible waste? It had been settled that oxydation or nitrification could not take place in water, neither could earth saturated with water serve to purify sewage.

The speaker said that he presumed that a majority before him lived in isolated country houses, and they certainly had much to be thankful for, when it was remembered that "God made the country and man made the town." The force and brevity of the adage quoted, never seemed clearer than in this connection of sanitation. Man required a certain proportion of the earth's surface for his support just as certainly as did the trees.

The location of houses should be on dry elevated places, with sunlight, fresh air, sinks, slops, soil pipe traps, ventilation, cess pool, removing excreta, dry earth system, subsurface irrigation, pure well water i. e. ground water, etc.

There was a limit to the quantity of pure water a given district would yield, and there also was a limit to the amount of fouling which the water of a district would bear without serious consequences to health or life.

The speaker said at the Danvers Hospital a large field has been prepared upon which to use the Hospital sewage for agricultural advantages, as well as for restoring as far as possible, the water contaminated, to its original purity.

Drinking water in country districts was an important matter to consider, as had been observed. Nothing deleterious was likely to come to a well from common drainage, unless there was a cesspool near. There were more killed by what might be called sanitary accidents, than by railroads. There was a penalty for the violation of natural laws, swift and certain. Here a discussion took place, and remarks were made upon the subject, by Hon. J. J. H. Gregory, B. P. Ware, Rev. O. S. Butler and others, after which the meeting adjourned for dinner.

AFTERNOON SESSION.

Rev. O. S. Butler presided, and after some appropriate remarks he introduced Miss Anna Barrows, a graduate of the Boston cooking school, and at present teacher of cooking in the public schools of that city. Miss Barrows is an entertaining speaker, and when she came to a practical test of cooking, which she did of various dishes upon the stage, with her portable kitchen furnishings, it was noticed that a large number of ladies were plying their pencils, as she informed them of her recipes, and explained the manner of cooking as she progressed with the different dishes. All had an opportunity to taste her delicate, delicious morsels, and not a few availed themselves of the privilege.

The dishes chosen to illustrate the lecture, illustrated the combinations of starch, sugar, fat and albuminoids which are necessary to satisfy the appetite, and nourish the body. The necessity of a change of diet was explained, more fat being needed in winter than in summer. Soups and savory dishes, and hot puddings are more desirable than meats and cold dishes. More attention should be paid to true economy in foods.

The second Institute of the season, was held at Beverly, Friday, Jan. 26, the subject for the forenoon being "The Dairy Cow and how to Feed Her."

President Appleton presided, and introduced Prof. Joseph B. Lindsay, of the Mass. State Experiment Station, as the speaker of the morning.

The speaker at first emphasized the fact that a great deal depended on the cow. No method of feeding would get twenty quarts of milk from a ten quart cow; nevertheless there is a right way and a wrong way to feed any cow,—an economical and a wasteful way. Upon a proper method of feeding, depends the success or profitable way, or the unprofitable way, with loss in the dairy industry. The subject was divided into two sections, the theoretical and the practical.

The meaning of the different terms used in the analysis of cattle foods was explained, and attention called to the fact that food is valuable only so far as the cow can digest it properly and assimilate it; thus if a cow is fed 20 lbs. of hay a day, she can digest only 55 per cent. of the same, or about 11 lbs., and only so much is valuable as nourishment, the balance being excreted in the form of manure. The term "nutritive ratio" means the ratio which the nitrogeneous substances bear to the non-nitrogeneous or starchy substances. Foods are divided into two classes, the coarse fodder and the concentrated fodder; the coarse fodders, such as are generally raised on the farm are from 55 to 65 per cent. digestible, and with one or two exceptions have a nutritious ratio of 1 to 10. The concentrated foods, such as cotton seed meal, gluten meal, etc., are from 75 to 80 per cent. digestible, and have a nutritive value of one to two.

Cud-chewing animals, such as the cow, are so made that they can consume and digest a large amount of bulky foods, but if anyone would get the best results, a liberal amount of concentrated food should be fed with the coarser foods. Many investigations have shown that a cow of 1000 lbs. weight, needs about 3 lbs. of digestible portion, $\frac{1}{2}$ to $\frac{3}{4}$ lbs. of digestible fat and 13 lbs. of digestible carbonhydrates in order to enable her to do her best work. The

method was shown which would enable one to combine the different foods so as to obtain the best results.

The speaker discussed the question of soiling cows in summer, and was of the opinion, that no definite rule could be adopted in all cases. Good pasturage is a perfect food for cows; the majority of pastures however, are poor, worn-out land, and the animals must waste a great deal of energy in getting a scanty supply of food. In such cases it is undoubtedly profitable to practice soiling. Two systems of soiling were shown, showing how the farmer could have plenty of green fodder for his cows, from the 20th of May to Nov. 1st. For winter feed, hay is too costly. If fed at all it should be fed sparingly, and in its place corn ensilage or corn and soja bean ensilage, corn stover and hay of vetch and oats, should be substituted. Corn meal should never be fed as an exclusive grain ration. While very digestible it contains a large percentage of starch, and not enough protein to make it profitable for milk producing. The speaker would never feed corn meal when it costs over $22.00 per ton, we have such a large variety of grains now to select from, that are more profitable to feed.

As a good daily ration for cows, 4 lbs. wheat bran, 3 lbs. corn meal, and two lbs. of cotton seed meal were recommended at present prices. Linseed or gluten meal could be substituted for corn meal or cotton seed. The above ration with all the coarse fodder they would eat, gave a properly balanced ration, and such a ration would tend to increase the flow of milk and make a much richer manure. The composition of milk could not be changed by different foods. The constitution of the animal governed the quality of the milk. No system of feeding could make a Holstein cow give Jersey milk. Very watery foods tend to slightly decrease the solids in milk, but as a rule, feeding has very little to do with the quality of the milk. Attention was called to the Babcock milk tester and the speaker thought every producer should have one, which would enable a purchaser of a cow to tell the quality of

milk she would give. In concluding the speaker urged that a greater variety of coarse fodder be grown on the farm, especially leguminous crops, and those be substituted for the English hay.

AFTERNOON SESSION.

In the afternoon, the subject was, "The State Board of Agriculture: What it has done and its Relation to Agricultural Education," by Hon. Benj. P. Ware, of Marblehead. Before introducing the speaker, President Appleton made some explanatory remarks somewhat as follows:

With the State Board of Agriculture, composed of four members, and with the subject of its work for agriculture and education in that line before us this afternoon, you will like to know, first, how that Board is made up.

Four are members ex-officio:—The Governor, Lieut. Governor, Secretary of State and President of the State Agricultural College. Three are appointed by the Governor for three year terms. Thirty-five are elected by the agricultural societies, which are either incorporated by statute or organized under general laws. It may seem to you a large number to do the executive work that falls to it under the statute, or is given it to do by special acts of legislation. The third class of its members as I have stated them, are chosen by the several societies, as they themselves shall determine. In our society the trustees elect one delegate for three years. You will thus see, remembering that every citizen in the county shall, under the statute, be eligible to membership, that our responsibility of the composition of the state board rests with our citizens, who are patriotic enough to pay the paltry sum of three dollars for life membership and to vote once a year for trustee, in their respective cities and towns. The right of societies to membership on the board, also depends upon other requirements which the board is either instructed by statute to enforce, or is therein authorized to make.

Each of the thirty-five societies is entitled to draw not exceeding $600 each year from the State Treasury, provided it has $3000 (at least) of property and has awarded in prizes, for the encouragement of agriculture, at least the amount of bounty it draws any year, and has otherwise complied with the rules and statute laws. Essex County with two delegates receives $1200, and has a valuation of $233,308,097 and an acreage of 272,549, while Worcester County has a valuation $191,955,290 and an acreage of 917,600. Essex ranks third in valuation and ninth in acreage or about $856.34 per acre, while Worcester ranks fourth in valuation and first in acreage or about $209.34 per acre.

Mr. Ware in commencing his address, spoke of the very intimate connection of Essex County with the State Board, from its foundation to the present time.

The first published idea of a State Board was by Rev. Henry Coleman, of Salem, in 1840. He was appointed by the Legislature, a surveyor of agriculture for four years and made a report of great value to that calling. Mr. Ware spoke of the value of the agricultural reports, prepared under the auspices of the State Board. They are forty in number and make up a veritable Agricultural Encyclopedia. Mr. Charles L. Flint, a native of Middleton, was the first secretary of the Board, the pioneer whose place it was to carve out a course in the making of these reports, and so well did he do his work that many states have taken it for their model. Mr. Flint was a poor boy, a graduate of Harvard, and the way in which he became drawn into his work was this: While sitting in a railway station one day waiting for a train, he happened to observe a printed notice of the Essex Agricultural Society offering a prize of $20 or $30 for the best essay on the cultivation of Indian corn. He at once conceived the idea of striving for the prize, which he did and secured it.

It was an elaborate and valuable treatise, and came under the notice of Marshall P. Wilder (the first President of the State Board), who immediately made up his mind that Mr. Flint was the man wanted for the position of secretary of the State Board, and he was secured just as he was about to go into a New York lawyer's office.

Mr. Flint held the office of secretary for twenty-seven years and in the meantime was the author of several books which have since become recognized authority.

A voluntary Board of Agriculture was formed in 1851 and Allen W. Dodge, of Essex County, was first Vice President. The following spring, the regular State Board was established by the Legislature.

In 1860, the secretary of the State Board called attention to the importation of pleuro-pneumonia in a herd of Holsteins. The disease spread very rapidly and a special session of the Legislature was called, and it cost the State $37,000 and six years hard work before it was stamped out. The State Board was in a measure the father of the New England Society, which was founded in 1863.

In 1879, the Board voted to require each Agricultural Society to hold at least three institutes a year in order to secure the State Bounty; these institutes though small at first, have since increased in importance and have been of great importance to the farmers.

In 1880, the Agricultural College was in ill repute, and was losing some $10,000 annually. The State Board succeeded in securing $33,000 from the State to clear off the debt. In 1878, through the influence of the State Board, a state inspector of commercial fertilizers was appointed. Every manufacturer of fertilizers was obliged to take out a license, and the regulations were copied by other states. The market value of all fertilizers was put down at the value of the plant foods in the fertilizer, by law.

The line of business of the State Board has been educational, and here the speaker read a list of titles of agricultural treatises brought out by the Board. A discussion

followed Mr. Ware's paper, which at times varied considerably from the subject, but brought many intelligent ideas which were interesting and instructive.

The third Institute of the season was held at Parker Hall, Newbury, Friday, Feb. 16, 1894. President Appleton presided, and after a few brief remarks concerning the town of Newbury, giving a summary of its characteristics, its topography, history, etc., he introduced Prof. S. T. Maynard of the State Agricultural College, as the speaker of the morning, who took for his subject "Small Fruits, and the Insects and Fungus Diseases Attacking Them."

He spoke of the conditions of fruit-growing in Massachusetts, which has greatly changed in many ways. Much larger areas are now devoted to the culture of fruits, especially small fruits, than formerly. This fact is well demonstrated by the statistics of fruit cultivation from 1875 to 1885. In 1875, 1,868,204 apple trees in the state, 12,000 cherry trees, 231,290 pear trees, 82,800 peach trees, 214,300 grapevines. In 1885, there were 2,507,350 apple trees, 33,643 cherry trees, 358,400 pear trees, 276,846 peach trees, 357,000 grapevines. Of strawberries there were 1,156,801 quarts raised in 1875, against 3,930,710 quarts in 1885. The value of the product in 1875 was $214,940, or 18 1-2 cents a quart; and in 1885, $406,895, or 11 cents a quart.

With the increased production of fruits comes a larger yield per acre, while improved methods lessen the cost. New and more productive varieties, too, give a better quality than heretofore. But with all the progress, there are many causes affecting the certainty of the crops, and it is only by the greatest skill and constant attention that profitable crops can be grown.

But with greater production, prices diminish; but not only prices, but the numerous insects and fungus growths have to be contended with, and also the large amount of

tropical fruits imported from more favored states of our Union or from foreign countries.

Another serious difficulty we have to contend with is the commissions we have to pay the wholesale and retail dealers. Prices have decreased, but not so with the commissions. The middlemen get the lion's share of the profits. The remedy is to combine and sell our own produce direct to the retailer, or, better still, to the consumer. Choice fruits always command good prices, and the more of it the people have the more they want, while poor fruit injures the market and a little goes a great way with the consumer.

But our greatest difficulty in growing fruit in Massachusetts is to prevent injury from insects and fungus diseases.

In speaking of remedies to be applied, Prof. Maynard repeatedly referred to the "Bordeaux Mixture" and "Kerosene Emulsion," and as the mixtures will prove of interest to farmers, formulas of both are herewith presented as follows:

Bordeaux mixture: Four pounds caustic lime, slacked into a wash with three or four gallons of water, four lbs. copper sulphate or blue vitriol, dissolved in two gallons of hot water. When cold thoroughly mix together, strain and dilute to fifty gallons.

Kerosene emulsion: One-half pound bar soap dissolved in a gallon of hot water; one gallon of kerosene, mixed and thoroughly churned or stirred until a butter or cheese-like substance is formed. Dilute with ten to twenty-five gallons of water.

Prof. Maynard first considered the insects injurious to the apple tree, viz.: The codling moth, bud moth, tent caterpillar, canker worm, full web worm, apple maggot and apple borer.

The first five may be destroyed by spraying with paris green, combined with the Bordeaux mixture. Apply with spraying pump, with vermosel nozzle. Make the first application as soon as the leaves begin to unfold, then at in-

tervals of about ten days or two weeks—about three times in all usually is sufficient.

Pear trees are also infested with the codling moth, and the same remedy will apply to them as to apple trees.

AFTERNOON SESSION.

The speaker for the afternoon not being able to be present, a general discussion took place among the audience, mostly on state roads and highways in general. There seemed to be a general interest felt relating to the roads of the county and the manner of building and repairing the same, and almost every person present had something to say in relation to them.

The last Institute of the season was held in Grand Army Hall, Haverhill, Friday, March 23, 1894. President Appleton presided and introduced Prof. George H. Whitcher of the New Hampshire Experiment Station, who took for his subject, "Dairy Work in General."

In opening the speaker said he would divide his subject into three sections, viz.: First, the cow, that is the machine we are to do our dairying with; second, the food for this cow; and, third, how to produce this food.

The cows that dairymen are using all over New England are, on the average, unprofitable cows, if we can credit our best statistics. The average cow is giving not more than 150 to 160 Boston cans of milk per year. She is a fodder consumer, but not a producer, except that she produces a calf, which, if allowed to mature, is like her mother, only more so.

This fact has been known for years. It costs more to keep the general run of cows than they produce. And the more a man has of them the poorer he grows; hence dairying does not pay.

Now what are we going to do about it? We may squander our time and fodder in feeding better, but we shall never make this scrub cow respond in a profitable

way. It isn't in her to produce milk, and it never will be. It is a matter of breeding better cows, then, and all I want to say is to point out some ways in which improvement may be made.

A cow should be judged by results, not by the color of her nose, the size of her horns, nor the regularity of her markings, but by her ability to convert food into milk and butter profitably.

No man should be satisfied with a cow that does not produce annually, 6000 lbs. of milk or 275 lbs. of butter, and more than this, no man should be satisfied with a cow whose product of milk or butter does not bring an average market price of at least $20.00 more than the cost of her keeping, and he should not be satisfied with that, for the possibilities are that she can be made to produce $35 or $40 more than the cost of keeping.

I think, however, that to do this one must breed his own stock, and here is where the question of breed comes in.

My experience with breeds is confined to six years with Durhams, Ayrshires and Jerseys, and four years with Holsteins, at the New Hampshire Experiment Station; and in the table which I have prepared, you will see the results of this work.

Pasturing during summer season,	$8 00
Grain " " " 1000 lbs.,	11 00
180 days full winter feeding at 18c per day,	32 40
30 days partial feeding while dry,	3 00
	$54 40

Taking the average live weight of our herds into consideration, we get the cost of keeping our

Ayrshire cows to be,	$54 00
Jerseys,	48 00
Durhams,	60 00

TABLE 1.

	Annual amount of Milk	Butter	Cost of Milk	Butter
	Boston Cans	Pounds	per can.	per lb.
Jersey,	285	265	18.8	14.5
Ayrshire,	320	275	16.8	15.0
Durham,	333	265	18.0	17.7

BEST COW OF EACH BREED.

	Cans	Pounds	Per cow
Jersey,	375	330	13.5 cents
Ayrshire,	415	340	13.2 "
Durham,	530	455	12.3 "

First, a word about the cost of keeping a cow weighing 1000 lbs. The part of this table No. 1, that is most interesting, is that showing what the best cow can do, and while we cannot all have this best cow, still she is the one to take for a pattern, and then come as near her as possible.

The second table shows figures giving the value of product over and above cost of keeping, and it gives us some ideas as to the place where each breed should be placed, whether as a milk producer or a butter producer. It will pay the dairyman to study this table a little.

The first column of figures shows the value of the milk produced by our herd for 6 years at 22 cents per can, which is the average price on the milk car as nearly as I can figure it. The second column shows the value of the butter at 22 cents per pound, which is what the creameries of New Hampshire average to pay, plus the value of the skim milk at 25 cents per hundred pounds: and from these values is taken the cost of keeping. This leaves us what we call profit.

JERSEY	MILK	BUTTER
Value of product,	$56 10	$67 80
Cost of keeping,	48 00	48 00
Profit,	$8 10	$19 80
DURHAM		
Value of product,	$73 48	$71 30
Cost of keeping,	60 00	60 00
Profit,	$13 48	$11 30
AYRSHIRE		
Value of product,	$70 40	$73 00
Cost of keeping,	54 00	54 00
Profit,	$16 40	$19 90

With our best cow of each breed, the case would stand as follows:—

Jersey profit,	$32 00	$35 00
Durham profit,	53 00	55 22
Ayrshire profit,	36 00	33 45

The latter table shows us, first, that the Jersey is not profitable as a milk producer but as a butter cow. This is not new, but it gives figures to show for the generally accepted fact a profit of $8.10 as a milk producer and $19.80 as a butter cow. Milkmen cannot afford to sell Jersey milk.

The Durham is considered as a milk producer, and so she is. The profit as a butter cow is $11.30, as a milk producer $13.48.

The Ayrshire is an all round cow, good for milk, but a little better for butter, though as a rule she is not credited with being a butter cow. Our figures, however, show that she is the equal of the Jersey as a butter cow and the superior of the Durham as a milk producer.

But in the Durham we have a general purpose cow. I say this in full realization of the protests of the "nervous theory" advocates, and want to say that the Durham, which

is the best cow in our barn, the one that yielded a profit of over $50, is as good a beef animal as any butcher need ever wish to lay on his block.

There is and ought to be a general purpose cow, and she will be on earth when the highly bred, nervous, weak constitutioned breeds, with a predisposition to tuberculosis, garget and milk fever, are on the back seats or in the hospitals.

Part two of this talk is on the feeding of our cow.

She must have food, and it is time that she should have it in such form and proportion, that it may do her the most service.

There was a time when farmers believed that herdsgrass, hay and corn meal were the foundation stones in the structure of good feeding, and many to-day believe the same thing; but, as a matter of fact, they are two of the poorest articles when fed together that we can use. They are both excessively composed of starch, and while it is well-known that a cow requires daily from 2 to 2.5 pounds of albuminoids and from 13 to 15 pounds of starch to give the best results, or six pounds of starch for each pound of albuminoids, this herdsgrass hay contains 14 lbs. of starch to one of albuminoids. So if we should feed a cow on this alone, we must get her to consume 100 lbs. of hay daily to get what starch she requires, and then instead of having two lbs. of albuminoids which she requires, she will have only one pound. Now if we add corn meal to this we are using a grain that has 9 lbs. of starch for every one pound of albuminoids, and can never balance a ration in that way. What we must do then is to find some grain that has an excess of albuminoids, and this we find in cottonseed meal, gluten meal, linseed, middlings, shorts, brewers' grains, etc.

A balanced ration is simply one that has the albuminoids and starchy parts in the right proportion, and balancing a ration mean simply to so supplement our coarse fodders that this correct proportion will be attained, hence the

coarser and more starchy the foundation of a ration the greater must be the per cent. of albuminoids in the grain.

The purchase of corn meal by milk and butter producers has been and is to-day, a great hindrance to successful dairying.

A ton of gluten feed is worth probably 50 per cent. more than a ton of corn meal, when fed with ensilage or hay or other coarse fodder, and yet they cost the same money.

The following tables give some standard mixtures of grain and standard rations for cows weighing 1000 lbs. alive.

STANDARD GRAIN MIXTURES.

No. 1—Corn meal, 100 lbs.; middlings, 100 lbs.; cotton-seed, 100 lbs.

No. 2—Corn meal, 200 lbs.; middlings, 400 lbs.; gluten, 300 lbs.

No. 3—Corn meal, 300 lbs.; cotton-seed, 300 lbs.; gluten, 150 lbs. This is for butter making particularly.

No. 4—Corn meal, 200 lbs.; cotton-seed, 300 lbs.; shorts, 300 lbs.

No. 5—Gluten, 100 lbs.; cotton-seed, 100 lbs.; shorts 100 lbs.

No. 6—Gluten, 100 lbs.; cotton-seed, 200 lbs.; shorts, 100 lbs.

STANDARD RATIONS FOR COWS WEIGHING 1,000 LBS.

No. 1—Hay, 11 lbs.; corn fodder, 11 lbs.; grain mixture No. 3, 9¼ lbs., or 7 qts.

No. 2—Hay, 11 lbs.; corn fodder, 11 lbs.; grain mixture No. 4, 10½ lbs., or 10½ qts.

No. 3—Hay, 12 lbs.; oat straw, 8 lbs.; grain mixture, No. 3, 9 lbs.; or 7 qts.

No. 4—Hay, 12 lbs.; oat straw, 7 lbs.: grain mixture, No. 4, 10 lbs., or 10 qts.

No. 5—Ensilage, 50 lbs., or two bushels; hay, 5 lbs.; grain mixture, No. 3, 7½ lbs., or 5½ qts.

No. 6—Ensilage, 50 lbs., or two bushels: hay, 5 lbs.: grain mixture, No. 4, 8 lbs., or 8 qts.

(Grain mixtures Nos. 5 and 6 should only be fed with very coarse fodders, like straw, swale hay, corn fodder, etc.)

No. 7—Ensilage, 30 lbs., or five pecks; hay, 10 lbs.; grain mixture, No. 3, 8 lbs., or 6 qts.

No. 8—Ensilage, 30 lbs., or five pecks; hay, 10 lbs.; grain mixture, No. 4, 9 lbs., or 9 qts.

No. 9—Ensilage, 40 lbs., or seven pecks; clover hay, 8 lbs.; grain mixture, No. 1, 8 lbs., or 6 qts.

No. 10—Ensilage, 50 lbs., or two bushels; clover hay, 5 lbs.; grain mixture, No. 3, 7 lbs., or 5½ qts.

No. 11—Ensilage, 40 lbs., or seven pecks; clover hay, 8 lbs.; grain mixture, No. 2, 8¼ lbs., or 6 qts.

No. 12—Hay, 10 lbs.; straw, 10 lbs.; grain mixture, No. 5, 9 lbs., or 9 qts.

AFTERNOON MEETING.

At the afternoon meeting Prof. Whitcher said he would answer any questions suggested by the morning's discussion, which he did, after which he said he would specially consider ensilage and soiling. Ensilage, said he, is of great importance to dairy farming. He spoke of the strong opposition to it when first introduced; and he also spoke of the erroneous view many people had of it as a perfect food, when, as a matter of fact, no one food is perfect. The speaker believed that no crop produced as much fodder with as little work on an acre of ground as Indian corn. He described the old process of cutting cornstalks in the field, tying them up, etc., and compared the labor of raising ensilage comparatively small compared with the old way of harvesting a piece of corn. Some errors concerning ensilage had been corrected. For instance, it was formerly thought that $600 or $800 was required to build a silo, but that figure has been reduced materially. Neither is it desirable to raise the tallest corn for ensilage—it is apt to be woody. Corn should be cut just when it is beginning to tassel. It is a loss of time and money to break off ears of corn from the stalk to use for corn meal. The

grain may just as well go into the silo, from which it will eventually all be fed to the cattle, and do as much good as if fed in the form of meal.

No milk raiser in Massachusetts, said Prof. Whitcher, can afford to get along without a silo. The expense of building one should not be over $1 per ton, provided the capacity is one hundred tons or over. In regard to the crop to be raised, he said that the ordinary run of land did not possess enough potash. He did not favor a very large kind of corn, but preferred some kind that would produce ears large enough to boil before the first frost comes.

He especially recommended the Sanford corn for ensilage. This is neither a sweet or a field corn. He would sow 24 or 25 quarts to the acre, which is none too much, and the yield should be 24 or 25 tons. Three pecks of southern corn to the acre is none too much.

There are two ways of harvesting—whole and cut. It should be cut, though it is better to stow away whole than not at all. It was at first deemed necessary to weight ensilage with sand or rocks, but this is intended to protect the top only, and, as a matter of fact, it does not do that: some six inches on top are pretty sure to be spoiled any way, and his experience was a foot of sawdust on top was as good as anything. A fair estimate in feeding ensilage to cows is to allow five tons to a cow per annum, or 45 to 50 pounds per day to a cow of 1000 pounds.

Some questioning and discussion followed, in which various ones participated, in the course of which Prof. Whitcher stated it as his belief, that the interest on the money invested in a brick or stone silo would more than keep a wooden one in repair and rebuild it when necessary.

IMPROVED PASTURE AND WASTE LAND.

The Committee on Improved Pasture and Waste Land have attended to their duty, and respectfully recommend the following premiums:

$15. First premium, to Otis F. Putnam of Danvers.
$10. Second premium, to George J. Pierce of West Newbury.

Isaac F. Knowlton, Nathan Longfellow—*Committee*.

STATEMENT OF OTIS F. PUTNAM OF DANVERS ON IMPROVED WASTE LAND.

The lot of land to which I call your attention was, in 1878, a forest of about thirty cords' growth of wood per acre. The wood was cut, leaving about one hundred timber trees, of from ten to sixty feet each, ton measure. The bushes were sprouted two or three years and allowed to grow, until 1890, when I bought the farm, of which this lot was part.

I sprouted the bushes that and the next year, and in November, 1892, commenced digging out all the rocks, large or small, that appeared on the surface of the ground. We spent 25 days doing the job, which, at $1.50 per day, would cost $37.50.

We then expended 20 days' labor for men, $30, and 20 days for horses, at $1 per day, $20. The rocks we drew to the borders of the field, and built in the fall and winter of '92 and spring of '93, about 100 rods of heavy four-foot stone wall around that portion of the field that had before an old rotten rail fence. The small rocks I gave to the Lynn & Boston Street Railway for paving, about 100 two-horse loads. This labor and building the wall I do not regard as expense of clearing the lot. In 1893 I commenced ploughing the lot with a National Sulky Plough, and three large horses, with driver, and four men as helpers, getting out all rocks that we found. We worked sixteen and one-half days, at an expense of $123 for men and $49.50 for horses. We then commenced drawing off rocks, large and small, that we turned out, and expended 20 days' labor for men, $30, and 20 days for horses, $20.

In the winter of 1892 I cut the timber trees and carried them off, leaving 100 stumps to be got out early in the

spring. This year we commenced blasting them out with dynamite. We spent four days' labor at this job ($6), and in clearing out roots, drawing and burning stumps, we expended nine days' labor for men ($13.50), and one horse three days ($3). I paid $35 for dynamite. This labor brought the field to a condition to cultivate. I spread six cords of cow manure to the acre over five acres of the lot, and dressed the balance of the lot with Mapes' fertilizer.

I planted two and three-fourths acres of potatoes and got 550 bushels, equal to about 200 bushels per acre. I planted two acres of "Angel of Midnight" field corn, and where it was not injured by the crows yielded about 70 bushels per acre of shelled corn. I planted one-half acre of squash, which, with bugs and all, was a failure. I planted one and one-eighth acres of cabbage and garden vegetables, which gave a good yield.

SUMMARY OF EXPENSE.

Digging rocks,	$ 37 50
Teaming off rocks,	50 00
Ploughing and picking rocks,	172 50
Picking and drawing rocks,	50 00
	$367 50

The lot contains six and three-eighths acres of land, cleared at a total cost of $367.50.

Since writing this renort I have taken one row of corn across the field, husked and weighed it green, which, at 3600 hills to the acre, gave a weight at 70 lbs. per bushel, equal to 98 1-2 bushels of shelled corn per acre. I don't know how much it would shrink per bushel, but deducting 20 per cent., it would yield 78 bushels shelled corn per acre.

Respectfully submitted,

OTIS F. PUTNAM.

REPORT OF GEORGE J. PIERCE, OF WEST NEWBURY, ON IMPROVING WASTE LAND.

The land I enter for a premium was a bushy pasture and waste land, situated on Break Hill, on the main road from Haverhill to Newburyport.

In 1892, I mowed and burned the bushes and planted it with corn. It cost me $3.00 per acre for mowing and burning the bushes, for ploughing with 4 oxen and 3 men, $7.00 per acre ; spread on 5 cords of dressing to the acre and harrowed in ; then planted with corn and potatoes, harvested 250 bushels of ears of corn, 50 bushels of potatoes and 3 bushels of beans.

In 1893, spread on 5 cords of dressing per acre and sowed barley for fodder and set out 4000 strawberry plants, and one half acre of potatoes ; in the fall we had 3 tons barley fodder and 50 bushels of potatoes.

In 1894, spread on 4 cords of dressing to the acre and sowed it down with barley and grass. I had a good catch of grass and 3 1-2 tons of barley fodder, and 2500 boxes of strawberries.

In fall of '93, mowed and burned bushes and ploughed land, cleared off the rocks this spring and prepared the ground for corn, planted the Longfellow corn, used horse hoe 3 times and hand hoe once. There are 3 acres and 11 rods in corn. Harvested 400 bushels of sound corn. There were 3 tons and 900 lbs. of top stalks, and 3 tons, 840 lbs. of fodder. Put on the corn 600 lbs. of fertilizer at $36 per ton.

Respectfully submitted,

GEORGE J. PIERCE.

I hereby certify that I have measured a piece of reclaimed pasture land for George J. Pierce of West Newbury, to be entered for premium with Essex Agricultural Society, and find it contains 10 acres, 33 1-2 rods, of which there is in grass, 3 acres, 153 rods ; in barley and garden

truck, 1 acre, 110 rods; in potatoes, 1 acre, 79 1-2 rods; and in corn, 3 acres, 11 rods.

LEWIS W. SMITH.

West Newbury, Mass., Nov. 23, 1894.

REPORT OF COMMITTEE ON ROADS.

An entry of one half mile of road was made by David A. Pettengill, supt. of roads for the town of Danvers.

The full committee met him Nov. 12th, and with him made a careful examination of the road entered for the Society's premium. And we were much pleased with its appearance, and satisfied with the excellence of the work, presenting a smooth, even surface, carefully graded, and durable in its construction, built on the Macadam system, with the crushed stone, purchased of the Broken Stone Co., of Boston, delivered by cars, very near the work, making the teaming much less expensive than under ordinary circumstances. The total cost of this half mile of road, according to the statement attached, was $2450.

This seems a high price for country roads, and the committee were of the opinion that quite a saving might have been made, by using screened gravel for the surface finish, as a portion of this road was done, with equal or better results.

For the most economical construction of good roads, the location and environments must be considered, for what might be the better system in one locality, might prove unnecessarily costly in another, as, for instance, in a district where good gravel abounds, it might be questionable whether it would be advisable to build or repair a road on the Macadam or Telford system, instead of the gravel near at hand.

The importance of good roads has been for a few years, and is now being discussed, as never before in this country. And all classes of the community, especially far-

mers, are becoming fully convinced, that economy as well as comfort, requires better, aye, much better roads, than we now have. The people, generally, look upon the "Act of the Legislature" in regard to state roads, with evident satisfaction, the building of which, on the most approved scientific principles, will be an object lesson, by which our town road surveyors and superintendents may improve their methods. It is believed that through the incompetency of the men usually elected to that position, the large sums appropriated for road repairing and road building have not been expended profitably, or given the benefit which the public ought to receive, so that while good roads are expensive, bad roads are more so. It is estimated that the bad roads of the country cost the farmers especially, and others, several hundred millions of dollars annually.

Let us therefore encourage the building of good roads, national roads, state roads, country roads and town roads of good quality. We may well look abroad for examples of thrift and economy, in ancient and modern times, for roads centuries old, in perfect condition.

How else can thousands of the unemployed, be provided for with a comfortable living, better than by building such roads, and thus furnish work for those who are willing and unable to do better, and by compelling all able-bodied tramps who are unwilling to work, to earn the bread they eat.

Make begging by such a misdemeanor, subject to this remedy, as a substitute for mistaken charity, an appeal to their higher manhood.

The Committee unanimously award the 1st premium of $20 to the town of Danvers, for their experiment in good road building.

For the committee,

Benjamin P. Ware.

STATEMENT OF THE PIECE OF ROAD BUILT BY D. A. PETTENGILL, OF DANVERS.

The piece of road which I enter, is built of crushed stone, purchased of the Mass. Broken Stone Co. of Boston. In the first place, a trench is dug on each side, four inches deep, the width you wish to spread the stone to hold the edges. Then the first layer of No. 3 stone is spread and rolled until it becomes solid, using plenty of water, then No. 2 is spread and rolled again solid, then spread a light coat of No. 1, or what is called dust and rolled dry, after which use plenty of water, and roll until it becomes perfectly solid, or until it will hold the water from running through.

The length of the piece of road is 2870 feet or 5800 square yards, at a cost of $2450, or about 42 cts. a square yard. The cost includes grading, repair of tools, and use of water, etc.

Respectfully submitted,

DAVID A. PETTENGILL.

This is to certify that I have measured the piece of road, and the statement is correct.

JAMES L. ROBERTS.

REPORT OF DELEGATE TO OTHER SOCIETIES.

Invitations to attend the exhibitions of other societies in the county were received from the Amesbury and Salisbury Agricultural Society, West Newbury Farmers' Club, and the Houghton Horticultural Society, Lynn. And your delegate is pleased to report that the fair at Amesbury was a surprise and a complete success. The exhibits of milch cows, oxen and poultry, far exceeded my expectations, both in numbers and quality. The fruit and vegetables shown in the hall certainly gave credit to Essex county, and surely no greater compliment can be paid; flowers, works of art and domestic work of the household were well rep

resented. It was of much interest to observe the people who gathered there to enjoy the festivities of the occasion. Apparently everybody, with their relations, were there, and enjoyed, as did your delegate, the efforts made for a successful "cattle show." This exhibition, as a whole, would compare favorably with many of the older and larger societies of the state. They were honored, as I believe never before, by the presence of the Governor and staff, who, with Gen. Cogswell and other invited guests, partook, with members of the society, of the hospitality of their annual dinner, served in a conveniently arranged room in the upper part of the exhibition hall building, and then joined in listening to admirable addresses by the Governor and Congressman Cogswell. This Society may well be congratulated on their spacious and well arranged buildings, recently constructed for show purposes.

The West Newbury Farmers' Club, after three years' omission, held a fair this year.

The fruit and vegetable exhibits were of most excellent quality, especially of apples. But the great feature of their fair is the dinner, gotten up by the families of the Club in the most bountiful and luxuriant style, served by the young ladies of the town, in a large tent on the village green. Some four or five hundred sat at the tables, who did their utmost to relieve them of the delicacies provided. But it was impossible, so the tent was thrown open freely to all of those outside who had not been provided with tickets. Speaking and music followed from a stand outside. A West Newbury fair is an occasion long to be remembered. It is made one of great social interest. Friends and relatives are invited from far and near, and they come to have a good time, and they have it.

Other engagements prevented your delegate from attending the exhibition of the Houghton Horticultural Society or the banquet that followed, but I have assurance that it continues to grow in breadth of work and influence. Lynn is a city of gardens, filled with flowers and fruits,

streets adorned with shade trees, with a park system of about one thousand acres of natural forest growth of all varieties of trees indigenous to this locality. This park has the highest hills, the largest boulders, the most romantic scenery to be found in the vicinity, including an artificial lake of many acres, with miles of fine roads permeating the whole. Doubtless all of these beautiful reservations and adornments have come from the influence of the Lynn Houghton Horticultural Society.

Respectfully submitted,

BENJ. P. WARE, Chairman.

REPORT OF THE COMMITTEE ON ESSAYS AND FARM ACCOUNTS.

The committee received this year, very few papers for examination. They have awarded $10 to Dr. J. W. Goodell, of Lynn, for an essay upon "The Family Horse and Its Care," and $8 to Joseph S. Howe of Methuen, for the "Report of the Committee on Root Crops."

Respectfully,

G. L. STREETER, Chairman.

Committee:—G. L. Streeter, Salem; D. E. Safford, Hamilton; N. M. Hawkes, Lynn; G. B. Blodgette, Rowley; J. M. Danforth, Lynnfield.

THE FAMILY HORSE AND ITS CARE.

In treating of the family horse I do not intend to discourse upon the origin of the different breeds, neither those especially celebrated for fleetness or strength, but the general pet and worthy friend of the whole household, who patiently lends his strength to assist you in your pursuits of pleasure or profit.

Selection.—In selecting a horse for general family purposes the size will depend much upon the size of the family, whether he is to be used only for pleasure driving on the road, or is expected to haul heavy loads and assist in the cultivation of the land. Whichever it may be, remember that it is much easier to do light work with a heavy horse than heavy work with a light horse.

The ordinary well built horse of fifteen hands in height, will weigh in fair condition about one thousand pounds. We would select one over, rather than under this size, of some good solid color, broad between the eyes, from which he gives you a good honest look, and keeps his ears erect, good-sized nostrils, well-developed neck and shoulders, arm and hock, short back, short and flat leg bones, and last, but most important of all, *sound feet*, entire in his anatomy as the Creator formed him, without any wicked or sinful abbreviations of man. However perfect the animal may be in all other respects, if his feet be poor, he will only be a source of anxiety and disappointment to you and of pain and misery to himself. The horse which will best and fullest answer these requirements will most often be found in some strains of the Morgan blood, honest, gentle, tractable, strong and patient, with sufficient speed for practical business purposes or pleasure driving.

Gait.—One of the most satisfactory gaits will be *a good brisk walk*, which will roll you along some four to five miles an hour.

If he will take you seven or eight miles an hour, with a three to four hundred pound carriage and two persons of ordinary size, you will have the satisfaction of throwing dust in the eyes of lots of slow joggers.

When you buy a horse for your own use and to keep for years, *buy a good one.* In a poor, cheap horse, there is neither comfort, consolation, pride or peace for the household.

We deem it no sin for any man, whatever his calling, to own and drive a good, sound, spirited horse. But to force

around the streets an old, poor, lame, half-starved animal, is one of the "seven deadly sins which cry to heaven for vengeance."

Age.—The horse for general family use should not be less than six years. If he has any weak points they will be likely to show themselves by that time. If he is found sound at that age, *well trained*, *not broken* and cowed by violent treatment, but educated, as any sensible domestic animal is capable of being, with good care and usage he will be good for fifteen years. Such an animal will render his most valuable services while in his teens.

We once were fortunate in purchasing a Blackhawk mare, 8 years old, which gave us good, satisfactory services for twenty-three years.

It was no idle life, or under the eight-hour system, but every day, Sunday and all, year in and out, and many a day in the harness twelve to fifteen hours. She was an active partner in the business, and hustled when the case required. She now slumbers on one of the shaded hillsides of Essex county, and her memory is cherished as an old and trusted friend.

We would much prefer a horse raised among the rugged hills of New England than the prairies of the west. He will be of much finer texture and of more nimble action. The New England horse has spent his youthful days in prancing up and down the rocky hills and has an energetic way in picking up his feet, making him less liable to stumble on rough and stony roads. The western horse spends his youthful days in pulling his feet out of the mud, and the same manner of handling his feet will stick to him through life.

Of course the blood and temperament of the breed may have some influence, but will seldom overcome the lessons of his early years.

Stable.—Having purchased your horse, the next thing in order will be a suitable stable to keep him in.

Better have a little spare room than to be cramped.

Twenty by twenty-five feet, with a good cellar beneath. well ventilated up through the roof, would make ample and comfortable accommodations. Have a trap door to the second story sufficiently large to take up your sleigh for summer, also hay, straw and grain, which should never be kept in the stable below, to absorb all the foul gases, and where the horse may get loose and eat to his injury, if not destruction. Have a tight partition between the stall and carriage room, to preserve the varnish on your carriage. Let the stairs always lead out of the carriage room to the second floor.

All doors should be hung on rollers. A double floor of inch boards will do for the main part, but the stalls should have plank for the upper floor, laid tight and smooth.

Stall.—Four by eight feet will be an average size, with a rack two and one-half by four feet, of four-inch strips, fastened one inch apart, and placed in the middle, rear of the stall floor, and inch auger holes in the first floor for drainage. This rack should be made to lift out, and the trench cleaned and flushed as often as necessary.

Crib.—We would have no crib. The old-fashioned crib is worse than useless. It is actually dangerous. First, it is built of wood, and on it many a restless horse has learned that incurable habit of cribbing. Second, it is usually to store the bedding under, from which ammonia and other foul gases arise, to the serious injury of the horse's eyes and general health. Bedding should be placed in a covered cage outside the stable, where it will dry during the day.

We would have an iron pot in one corner of the stall for grain and an iron rack in the other for hay. Whatever hay or grain he drops on the floor will be picked up. A box shoot should come from the floor above to the grain pot, or, better, a piece of ordinary galvanized gutter, on which the restless horse will have no inclination to nibble.

The picking up from the floor of a portion of the food has relieved, if not cured, many a cock-kneed horse. The

ground is the natural place from which the horse should feed.

Hitching.—Never hitch a horse in the stall by anything of indefinite length; he will either be hitched so short that he cannot lay down, or so long that he will get cast. The best hitch is a piece of twisted chain, with snap hooks on either end, and one of the snaps a swivel. Place an iron rod with a ring so that it will slide from end to end, about one and one-half feet long, firmly to the front middle of the stall, at such a height from the floor that when one end of the hitch is attached to the ring upon the rod, the other end will touch the floor. When the halter is fastened to this end it will allow the horse to pick up anything within two feet of the head of the stall, without danger of getting his foot over the hitch. A chain across the foot of the stall will prevent the animal from pawing his bedding all out from under him.

The stable should be well lighted, all windows supplied with weights, so as to open at top or bottom, or both.

Harness.—Never leave any part of the harness hanging in the stall room; the pungent gases which arise there will soon destroy its strength and beauty. Have a tight closet opening from the carriage room for this purpose. The gases of the stable may be greatly abated by the frequent use of land plaster or the carbolate of lime sprinkled about the floor.

Feeding.—The horse by nature is fastidious in regard to his food and drink, and will not consume foul food or drink unless driven to it by the unsatisfied pangs of hunger or thirst. If the food be sweet and clean, although of limited quantity, he will keep in better condition and spirits than when allowed indefinite quantities of poor, unclean rations. It is neither economy for you, or health for him to purchase second quality fodder.

We are continually prone to feed our horses too much hay. You not only waste the hay, but endanger the horse's health. For instance, feed him all the hay that he

will eat, then let him drink all the cold water he desires. Hitch up, and give him a good, smart drive, repeat this day after day, and if he does not acquire any difficulty in breathing, it will not be because you have not done your best to produce it. When the stomach is over-distended, there is no room for the lungs to expand.

From our continued observation of this matter for a long series of years, we have settled upon the following rule; One pound of hay per day to every hundred pounds that the horse weighs is sufficient, and six to eight quarts of oats, or its equivalent, for the size of horse which we are considering, and I would give one-half the ration at night. The horse, not unlike his master, craves a variety of food, and when left to forage at large, will select according to his taste, but when continually stabled is unable to do so. Oats are the best and safest food for summer, with now and then a handful of fine feed or shorts added.

But as cool weather approaches, nature demands something of a more warming nature. This demand is best answered by adding corn meal to the fine feed, also a small quantity of ground oil cakes is highly beneficial. When these are added to the oats, the horse eats slower and chews his food more perfectly.

Cracked corn, I would never insult my horse with, unless I desired him to have the colic and die. If you must feed corn, give it *whole* and best on the cob, then he will nibble it off, little by little, and chew it more thoroughly. Some kind of vegetable diet is also conducive to the animal's health, as potatoes, carrots, turnips and mangels. These should be used, not as a regular course, but simply as desserts. I am in doubt about the carrot having such nourishing qualities as many ascribe to it, above all other roots. We look upon it simply as an aid to digestion, the same as pepsin in the human family. Three or four good sound carrots once a day or two, will do better than a half peck at once.

Salt.—Salt should be placed where he can satisfy his desires for it daily.

Water.—If possible, always water your horse from the pail, be sure that it is clean and never allow it to be used for any other purpose about the stable.

Never allow him to drink more than one pail full at a time, and that drawn fresh. In cold weather one half the quantity would be better.

The man who will lead his horse down to the brook in cold winter weather, cut a hole through the ice and ask him to drink his daily allowance, should have a guardian placed over him by the Society with a long name, and be debarred the right to vote in town meetings.

Clothing.—As cold weather approaches, the horse will demand more and warmer clothing, and if you do not supply it, nature will, by a long rough coat of hair. Great improvement has been made, in this matter, since the epidemic of influenza, which passed through our stables some fifteen years ago, and ruined or destroyed many of our valuable animals.

Grooming.—Remember that a good, thoroughly groomed animal is in better condition to perform his daily task than the poorly groomed animal, with his extra grain to offset the neglect. Let it always be done out of the stable in fair weather. You would not like to have your clothes brushed over your own food, neither does he relish his own dirt. Keep a hook and clean out the feet, and in summer time wash the feet and legs daily.

Shoeing.—To begin, let us examine the anatomy of the horse's foot. We find a hard, horny covering, containing a soft elastic cushion, called the frog, whose office is to lessen the concussion when the foot is brought with greater or less force in contact with the solid bed of the road; also this frog is the horse's organ, wherein his sense of touch is placed, answering to him, as the cushions on the ends of your fingers do to you, and are most valuable, when in a condition of perfect health.

Nature designed the horse's foot for use on the sodded ground. But man demands that it shall be made to endure constant use on the hard gravel road or the paved street. Hence the necessity of shoeing.

It should be done with the *least* amount of iron or steel that will protect the foot from injury, while he is travelling on the road.

For the common driving or family horse, we deem the plain flat shoe the best, and all that is required while the ground is free from ice and snow. Steel is better than iron, because it can be made lighter and stiffer of the same weight. We opine that the day is not far distant, when the fleetest of our racing horses will wear the shoe made of aluminum. The frog should be allowed to touch the ground at every step, and the horse will be surer footed thereby. Great heavy shoes and clumsy calks, are an abomination to the horse, and should be to his considerate owner. When from the icy condition of our roads, it is necessary to have sharpened calks, always dull the inside calk on the hind shoe. The natural growth of the hoof will require that the shoes be reset, every three or four weeks, whether they be tight or loose.

Harness.—For common driving and work when not over five hundred pounds will be the average load, the common breastplate is most desirable, coolest and easiest and quickest put on, and most comfortable for the horse. Let the bridle be *open*, giving the horse an unobstructed view of all objects, which soon become familiar.

The horse starts and tries to shun fancied dangers, *because he hears more than he sees.*

If you blind his sight, stuff his ears with cotton, to the same degree. I would not discard the check, but make it of such length that when the animal is moving at his natural gait, it will be loose and not tight. The horse without check, while standing hitched or not, is prone to be nosing around on the ground and liable to get into

trouble. The check may also save the horse from a fall if driven down hill with a loose rein.

Carriages.—Let the carriage be in heft, in due proportion to the load to be carried. The more we examine into this matter, the more enormous becomes the amount of horse-power wasted, by using an eight hundred pound wagon to carry an average load of three to five hundred pounds.

When your carriage will not carry its own weight without injury, you had better discard it for one that will, while hauling around two or three hundred pounds unnecessarily. Just multiply it by the number of miles travelled in a year, find out how many tons you are hauling for nothing, and how much power you are throwing away. Better make two loads and quicker time.

Clipping.—This is a fashion created and strongly advocated by *lazy grooms*, who wish to keep their horses in sleekest condition with the least trouble and labor on their part.

I hear men say, I did not know how smart my horse was, until I had him clipped. In answer, we would say to them, some snapping cold morning in winter, put on your summer bicycle rig, take a spin of ten or fifteen miles, and I will bet you *pound* to *pence* you will beat your own best record, and find how nice it is to have your overcoat stolen just as winter is coming on. If the poor helpless robbed animal was properly cared for, it would not be as bad. *But he is not.*

Often he is seen curled up, shivering, in the cold windy street, while his thoughtless drivers are gossiping around a good warm fire.

Nature provides the horse with two suits of clothing, a thin one for summer and a thicker one for winter. If the horse is blanketed early in the season and kept generally comfortable, the winter coat will not grow as long and thick as when left to shift for himself.

Disease.—The horse is liable to many of the same diseases as the human species, and when so attacked

requires the same kind of treatment. There being the same difference in temperament, in different individuals, as in mankind, there should be a like difference in dose. Eight to ten times the dose given to the average man would be a safe and efficient dose for the average horse. Much medicine, as well as food, is wasted among domestic animals. We deem the services of the *veterinary dentist*, skillfully applied, one of the best safeguards against disease.

The horse which is not allowed to run at grass, for years at a time, finds trouble in chewing his food, because the front teeth have grown sufficiently long to prevent the grinders or molars from coming together, and doing their work properly, hence the food is swallowed in a half masticated state. It produces irritation and disease of the lining membrane of the stomach and bowels. The horse is poorly nourished, soon he becomes weak, and is in general bad condition; when the mouth is put into a normal mechanical condition and the horse is nourished by his food, he needs precious little drugs to keep him so.

If our efforts shall have been instrumental in making the horse more comfortable, better cared for, of longer years of usefulness to his master, and less pain and suffering to himself, we shall be well satisfied with the result.

REPORT OF NEW MEMBERS.

The total number of new members to Nov. 1st, 1894, was twenty-seven, including those who, by receiving awards of seven dollars or upwards, became members under the rule which deducts three dollars from each award to non-members for membership, which membership is for life, without assessments, and entitles the member to a voice and vote in the society's business, and a copy of its

annual publication of its transactions. The following places furnished the new members.

Amesbury,	1	Lynn,	1
Boxford,	1	Lynnfield,	1
Bradford,	1	Merrimac,	1
Danvers,	3	Newburyport,	2
Groveland,	1	North Andover,	1
Georgetown,	2	Salisbury,	1
Haverhill,	6	West Newbury,	5

IN MEMORIAM.

In obtaining the names of members of the society deceased, the Trustee in each town and city was requested to notify the secretary of the death and age of each member deceased, with brief notices of each in printing or writing, from which the following has been compiled :—

Edward H. Barnard, of Andover, died April 29, 1894, aged 69 years. He had been engaged in painting for many years, was a very worthy and upright citizen, and always took great interest in agriculture.

John I. Ladd, of Boxford, died Aug. 21, 1894, at the age of 78 years and 6 months. He was born and spent the greater part of his life in Groveland, where he held responsible town offices ; also served as County Commissioner and Deputy Sheriff. Although not an extensive farmer he was much interested in the society, and when the fair was held at Beverly several years ago, it was the first fair he had missed attending for forty years. He became a member of the society in 1858.

Benjamin N. Dodge, of Beverly, died during the past year, aged 64 years, was well known as one of the pioneer icemen on Wenham Lake, and was also engaged in farm-

ing. He had been one of the selectmen, also an assessor of Beverly.

ELIJAH E. LUMMUS, of Beverly, died during the past year, aged 63 years. He was a well known and highly esteemed citizen. For many years he had been engaged in the Agricultural Implement business in Boston, and had an extensive acquaintance. He had served as selectman and overseer, and also represented the town in the legislature.

JAMES P. KING was born in Danvers (now Peabody,) Nov. 8, 1817, and died in Peabody, March 17, 1894, in the seventy-eighth year of his age, surrounded by his immediate family and household friends. Mr. King was one of the oldest and most useful members of our society, having served the society as one of its Trustees for many years, and for several of the last years of his life, was one of its Vice Presidents. As a member of the society he was always found at his post of duty, serving on the most important committees, and lecturing before our farmers' Institutes upon agricultural subjects, where he was always welcome as an intelligent, practical farmer. Mr. King was as widely known among our farmers as any man in the state, among whom his death is sincerely lamented. As a citizen of his native town, Mr. King had but few equals, and no superiors; he was always in favor of town improvements, giving of his time and money to secure the best results. About thirty of the best years of his life were spent on the board of overseers of the poor of the town, by which he endeared himself to the unfortunate poor, who looked to him as a father and protector. Working always, he marched in the front rank of the moral movements of his time, from his earliest boyhood. The cause of anti-slavery, temperance and woman suffrage found in him a warm friend and ardent defender. During the war of the Rebellion he was a true patriot, a friend of the soldier; but the proudest position of his useful life was that of a practical

farmer, and his happiest hours were those spent on his fertile fields, and in association with the members of the Essex Agricultural Society. His funeral was largely attended by the representative men of the old society, and the most prominent citizens of the County, by whom he was very justly esteemed.

George W. Ellis, of Hamilton, has died during the past year. He was a worthy citizen, and respected by all who knew him.

Mrs. Oliver Patch, of Hamilton, died during the past year. She was a very estimable woman and had been a member of this society for twenty-four years.

Elbridge Tenney, of Newbury, died during the past year.

William Noble, of Saugus, died March 22, 1894, aged 75 years. Mr. Noble was born in England. He was always an upright man, enlisted in the late war July 22, 1862, and discharged the following year for disability.

Stephen E. Noyes, of West Newbury, was born June 21, 1811, died Feb. 14, 1893. Joined the Essex Agricultural Society in 1861, was a good farmer and took quite an interest in the society.

David L. Goodridge, of West Newbury, died March 29, 1893. He was a very successful farmer, a member of the society a long time, and leaves three sons now members of the society. He was an honor to the town.

Isaac F. Osgood died in North Andover, Dec. 24, 1894, aged 69 years. Mr. Osgood was born in North Andover, and with the exception of one year was a resident of that place. In 1875 he was appointed Postmaster, a position which he held about eighteen years. He was a man respected by all who knew him. He held a number

of town offices, being Town Clerk for thirteen years, and also being one of the School Committee for a number of years.

Charles P. Savory, of Groveland, died Nov. 11, 1893. Mr. Savory was an influential citizen; his death is sincerely mourned. His aims and endeavors were those of an honest, upright man. His devotion to the work of his garden was an example worthy of general commendation, so in fruit and vegetables it was given him to see a rich triumph of that for which he aspired and wrought.

Jacob Austin Johnson, of Lynn, died April 7, 1894, at the age of 72 years, 8 months and 10 days. He was a native of Lynn, and his ancestors were among the early settlers of the town. Mr. Johnson engaged in shoe manufacturing when quite young, and at one time did a successful business as a dealer in linings and other shoe supplies. Disposing of his interest in the last named trade, he was for some years owner of a large retail boot and shoe store in Boston. Meeting with reverses, he became the agent of several of the best known nurseries in the country, which business he continued until his health failed, a short time before his death. He represented Ward 5 in the common council in 1858, and for many years thereafter held the office of Assistant Assessor in the same ward.

Quincy Adams Towns was born in Roxbury, N. H., October 2nd, 1834. In 1851, when but seventeen years old, he left his father's farm, resolved to work out his own destiny, and moving to Massachusetts, located in Danvers. Here he learned the shoemaker's trade applying himself closely for five years, becoming thoroughly familiar with all the details of the business, and then branching out for himself. In 1862, he first came to Lynn, establishing the business of "Heels & Rands," which from a small begin-

ning was always an increasing business,until at the time of his death it had become one of the largest of Lynn's industries.

Mr. Towns always took an active interest in public affairs and was a man of great influence in municipal and State politics. He served the city five years as a member of the Board of Aldermen and was five years on the Public Water Board. Socially, Mr. Towns was an attractive figure, interesting himself in many organizations. He was prominent in the formation of the Oxford Club and was two years its president. He was also the first president of the Jefferson Club, an organization he had chiefly helped to found. At the time of his death, he was a Free Mason, an Odd Fellow, a member of the Lynn Yacht Club and Bay State Club.

He was one of the organizers and the first president of the Belt Line Street R. R. Co. Religious work claimed much of Mr. Towns' attention, he being an active member of the Second Congregational Parish and for many years chairman of the Parish Committee.

Quincy A. Towns was a man of sterling integrity, sound judgment, and a worthy citizen, in obtaining a thorough knowledge of whatever he undertook. He was absolutely tireless. Therein lay the secret of his success. Of him it may well be said, his word is as good as his bond. His death, hastened without doubt by an heroic act in saving two drowning children at Essex, Mass., left a void and yet seems untimely. His death occurred Jan. 11th, 1894.

William Low, of Rockport, died Jan. 24, 1894, in the seventy-third year of his life, after an illness of a few weeks. Mr. Low was a kind-hearted man of rather a retiring disposition,and clung to some peculiar ideas of his own, but it is said of him that he never refused to give to any worthy object when asked, and was always ready to do a favor when requested. He had held responsible positions

in town, having served as Selectman, Police Officer, Surveyor, etc.

HIRAM LITTLEFIELD, of Salisbury, died Feb. 9, 1894, aged 57 years. He was widely known as the proprietor of the Seaside House, at Salisbury Beach. Mr. Littlefield had been gradually wearing out in recent years, and when he consulted his physician he advised him to rest. This he could not think of doing. He was once a prominent business man of Newburyport, being in the coal and lumber business, and at the time of his death was largely interested in the lumber business in Canaan, N. H.

CHARLES HERRICK died in Topsfield, Dec. 24th, 1893, aged 81 years, 11 months. He was a shoe manufacturer, well and favorably known to the older members of the trade. He took a lively interest in agriculture, particularly in the cultivation of fruit, and raised a large crop of good fruit, both apples and pears, on a limited area of land. He was one of the first men in Topsfield to successfully control the canker-worm by the use of printer's ink. He had at one time in cultivation about 20 varieties of pears, and many a friend and neighbor was made happy by the gift of the fruit his skill produced. For a long term of years his shoe business furnished employment to many of the people of the town. He was a good citizen, a liberal supporter of his church, a trusted friend and a useful man.

SAMUEL P. ANDREWS was born in Salem, Dec. 8, 1814. Was educated for the ministry and ordained pastor of a Unitarian church. He served as clerk of the First District Court, Salem, from 1874 to 1885. He died Dec. 31, 1892.

JAMES BARR CURWEN was born in Salem, Dec. 20, 1818; died in Salem, March 23, 1894. Was for many years engaged in the South American rubber trade, and as confidential agent for Capt. John Bertram.

George Pettengill was born in South Danvers, Jan. 5, 1824; died Nov. 7, 1894. He was deeply interested in fruit, trees and flowers.

William Augustus Lander was born in Salem, May 8, 1816; died in Salem, June 27, 1893.

Daniel B. Gardner was born in Salem in 1833; grocer for many years: died in Salem, Oct. 24, 1893.

William P. Goodhue was born in Salem in 1807; grocer by trade; died June 11, 1894.

Hon. Caleb Foote was born in Salem, Feb. 28, 1803; editor of the Salem Gazette from 1825 until Oct. 2, 1888; served in the legislature and Massachusetts Senate; was a member of Gov. Edward Everett's council in 1838; postmaster of Salem from 1841 to 1844.

Dr. Henry Wheatland was born in Salem, Jan. 11, 1812. Graduated from Harvard College in 1832, and from Harvard Medical school in 1837. Supt. of the East India Marine Society, Salem, from 1837 to 1848. President of the Essex Institute for many years. Devoted his time and attention for many years to Essex County history and genealogy. He died in Salem, Feb. 27, 1893.

Paul Titcomb, of Newburyport, died Jan. 27, 1894, aged 76 years. He was for many years one of old Newbury's successful farmers and served his town as selectman for a number of years. He has been well known for many years as a grain merchant and established a large business by his fair and honest dealings. He was honored and respected by all who knew him.

Capt. Joshua Hale died April 18th, 1894, aged 81 years. He was the youngest son of an old fashioned family of ten children and died at the old homestead his father erected in 1800. He was a descendant of one of the oldest

Newbury families. His farm at Turkey Hill, has been in the family since 1642. As a citizen of Newburyport, he was universally esteemed, and held many important positions of honor and trust. He was public spirited and took interest in everything that concerned the prosperity of his native city. His sympathies were broad and his charities abundant.

Frank W. Evans died Nov. 22, 1893, aged 41 years, 8 mos. He was a machinist by occupation, and a member of the Common Council in 1887.

John Q. Adams died March 20th, 1894, aged 70 years. He was the fourth child of a family of thirteen children. All but two years of his life (spent in Bath, Me.) were spent in Newburyport and his boyhood in Newbury. He had been engaged in the provision business at the same stand since 1849.

Wm. T. Coleman died April 27th, 1894, aged 71 years. He was senior butcher in this city, and had been engaged in that line of trade for fifty years. Mr. Coleman was a most exemplary man, and for years had been actively identified with the Belleville Congregational Church.

Major George D. Sargeant. Our society lost a very prominent and valuable citizen by the death of George D. Sargeant, whose decease occurred in East Saugus, July 31. His death was caused by a stroke of paralysis which happened one week earlier, since which time he had only partially rallied. Mr. Sargeant was the son of Rev. Aaron D. Sargeant, a Methodist minister who had two pastorates in this city, during the first of which he was born. He had a good education which was finished at the Wesleyan University at Middletown, Connecticut. Before completing his college course in 1861, he enlisted in the 1st regiment, Connecticut Artillery, and went to the front, where he made an honorable record, and at the close of the war

he had won the rank of Major, by brevet. At the siege of Petersburg he was in the trenches one hundred days. He attended the reunion of his old regiment on the 13th of last June. Soon after his war service the University conferred upon him the degree of Master of Arts.

Returning to his birthplace he first engaged in the business of insurance, and later became a partner of the large morocco house of Philip P. Tapley & Co., marrying the daughter of Mr. Tapley. He continued the morocco business after the death of his father-in-law until after the great fire of November, '89, in which the firm's factories were burned. About that time he established the Lynn (iron and brass) Foundry Company, which concern at one time was the largest purchaser of copper in the country He has been a director of Lynn Mutual Fire Insurance Company and upon the retirement of Judge T. B. Newhall succeeded him as President, and afterwards Treasurer. In addition to these offices he was a director in the National City Bank, a trustee under the will of P. P. Tapley's estate and of the Tolman Fund.

Mr. Sargeant was a life-long Methodist, being at the time of his death chairman of the official board of the First M. E. Church here. His wife died a number of years ago, and he leaves two sons and two daughters. He was a sterling man and a scholar, and his loss to the city o his birth and its institutions is greatly lamented.

Ezra Baker. Ezra Baker died on Monday, July 24, 1893. He was a native of Lynn, and was born April 23, 1818. Brought up to the trade of the old town he became a shoe manufacturer and was one of the most successful for many years. About 1858 he engaged in the sewing machine trade, continuing for several years, and during a portion of the time covering most of the war and after, he was engaged in business in Norfolk and Baltimore. In June, '68, he returned to Lynn and started a real estate and insurance agency which he continued until his death, and

for a number of years past the house has been well known in the mercantile circles by the firm name of Baker, Marshman & Baker,—the junior partner being his younger son, Fred E. Baker.

In his early manhood he connected himself with the Unitarian Church, in whose affairs he was quite active, and from which he never separated. Imbibing the earnest spirit of the times, in the thirties of the century, he was an enthusiastic anti-slavery man; afterward a steadfast Whig, and in all his later years an unswerving Republican.

Mr. Baker's political aspirations were nearly nothing, and the only office which he ever held was for one year, that of a councilman, in 1873, near the close of which, upon the death of its President, Dr. Bowman B. Breed, he was chosen his successor.

Socially he was a very companionable man, and he was a charter member of the Oxford Club, which has long included so many of our prominent citizens. He was likewise very intelligent and much interested in good literature, being notably a lover of poetry.

His many agreeable qualities, increasing with his years, supplemented the aggressive activity of his early and middle life and mellowed his judgment;—and they won him a host of warm and appreciative friends to cherish his memory.

William Alvah Lamper. Mr. Lamper was born in Gilmanton, N. H., in 1824, and died in Lynn, Mass., February 6, 1893. He came to Lynn in 1850 and associated himself with his two brothers, Joseph B. and Stephen D., and they carried on the teaming business between Lynn and Boston. Later on, the sale of flour, hay and grain was added to their business, and in 1869 also coal, wood, lime and sand. In 1860 the express business was sold to Pratt and Babb, but the other business, which was very extensive, was continued by the Lamper Bros., and at the

time of Mr. Lamper's death the style of the firm was J. B. & W. A. Lamper.

He was greatly interested in all agricultural matters and took much pleasure in seeing good horses, cattle and all the products of the farm.

During the last few years of his life he often expressed the wish that he might be able to close out his business and spend the balance of life on a good little farm, but death came too soon for him to realize his cherished hopes.

DR. GILBERT L. STREETER, TREAS., IN ACCOUNT WITH THE ESSEX AG'L SOCIETY. CR.

1893-94.			1893-94.	
Nov.	To Bank Dividends received in October,	$285 20	By Balance due the Treasurer at beginning of the year,	$832 38
	State Bounty,	600 00	Amount of premiums and gratuities awarded by Trustees,	1,691 75
	Bank Dividends in April,	327 20	Rent paid to the Salem Athenæum,	25 00
	State Tax on Bank Stock refunded,	238 08	Expenses of Farmer's Institutes,	78 25
	Interest on Mortgage Note,	59 50	Expenses at Treadwell Farm,	245 30
	Cash received of New Members,	60 00	Expenses at Annual Exhibition,	14 50
	Amount rec'd from Committee on Annual Exhibition	381 12	Printing and Advertising including Transactions,	352 50
	Income from Treadwell Farm,	120 00	Interest on temporary loan,	93 75
	Unclaimed premiums,	96 00	Secretary's account,	250 30
	Balance due the Treasurer,	1470 63	Treasurer's account,	54 00
		$3,637 73		$3,637 73

Funds belonging to the Society, Nov. 1, 1894.

10 shares of National Hide and Leather Bank, Boston,	$1,101 87
3 shares of Revere National Bank, Boston,	377 62
18 shares of First National Bank, Salem,	1,914 66
18 shares of Salem National Bank, Salem,	2,000 00
42 shares of Asiatic National Bank, Salem,	1,281 25
12 shares of Mercantile National Bank, Salem,	1,226 50
23 shares of Merchants National Bank, Salem,	1,189 50
5 shares of First National Bank, Danvers,	375 00
8 shares of National Exchange Bank, Salem,	800 00
16 shares of Warren National Bank, Peabody,	1,595 40
15 shares of South Danvers National Bank, Peabody,	1,471 25
Mortgage Note,	1,000 00
	$14,333 05
Amount due the Treasurer,	1,456 13
	$12,876 92

SALEM, Jan. 3, 1895.

The above account has been examined this day, and is found to be correctly cast and properly vouched, and the securities as stated.

JOS. H. PHIPPEN, Auditor.

ART. 9. A committee shall be appointed annually by the Trustees, to audit the Treasurer's accounts, who shall report to the Society: and the same being accepted, shall be entered by the Secretary in his books.

ART. 10. In case of death, resignation, incapacity, or removal out of the County, of the Secretary or of the Treasurer, the Trustees shall take charge of the official books, papers, and other effects, belonging to the office that may be vacated, and give receipts for the same; which books, papers, etc., they may deliver to some person whom they may appoint to fill the office until the next meeting of the Society, at which time there shall be a new choice.

ART. 11. *Any citizen of the County may become a member of the Society, by paying the sum of THREE DOLLARS to increase the permanent fund of the institution.

ART. 12. A committee shall be raised from time to time, to solicit and receive subscriptions for raising a fund for encouraging the noblest of pursuits, the Agriculture of our county; the same to be sacredly appropriated to that purpose.

ART. 13. All ordained ministers of the Gospel who reside within the County, shall be admitted honorary members of the Society.

ART. 14. In addition to the usual number of Trustees annually elected, the past Presidents of the Society shall be honorary members of the Board of Trustees.

ART. 15. The foregoing constitution may be amended by a proposition of the amendment in writing by a member at a regular meeting; the same to lie over for the action at the next annual meeting of the Society.

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*Members will receive from the Secretary a "certificate of membership." No fines or assessments are ever imposed. Members are entitled to vote in all its transactions, with free use of the Library and a copy of the printed "Transactions" each year.

A premium of six dollars is now offered to the resident of the County obtaining the largest number of new members during the year ending Nov. 1.

OFFICERS OF THE SOCIETY,

FOR 1894-95.

PRESIDENT.

FRANCIS H. APPLETON, of Peabody.

VICE-PRESIDENTS.

JAMES J. H. GREGORY, of Marblehead.
OLIVER S. BUTLER, of Georgetown.
HORATIO G. HERRICK, of Lawrence.
ASA T. NEWHALL, of Lynn.

SECRETARY.

JOHN M. DANFORTH, of Lynnfield.

TREASURER.

GILBERT L. STREETER, of Salem.

HONORARY TRUSTEES.

JOSEPH HOWE, of Methuen.
BENJAMIN P. WARE, of Marblehead.

TRUSTEES.

amuel Cammett, Amesbury, Amos P. Alley, Marblehead.
Charles C. Blunt, Andover, Geo. W. Sargent, Merrimac.
John W. Lovett, Beverly, Geo. B. Bradley, Methuen.

Warren M. Cole, Boxford, Geo. A. Currier, Middleton,
William Thornton, Bradford, Geo. Abbott James, Nahant,
Andrew Nichols, Danvers, N. Warren Moody, Newbury,
Albert E. Lufkin, Essex, Otis L. Kent, Newburyport,
Sherman Nelson, Georgetown, A. M. Robinson, N. Andover
A. F. Harvey, Gloucester, E. Pope Barrett, Peabody,
Sam'l B. George, Groveland, Allen Smith, Rockport,
Albert W. Dodge, Hamilton, George E. Daniels, Rowley,
Thomas Sanders, Haverhill, James E. Page, Salem,
James W. Bond, Ipswich, John Q. Evans, Salisbury,
Warren C. Allyn, Lawrence, Samuel Hawkes, Saugus,
Edwin Bates, Lynn, David Warren, Swampscott,
John H. Perkins, Lynnfield, Chas. J. Peabody, Topsfield,
Dan'l W. Friend, Manchest'r, David Pingree, Wenham,
W. E. Merrill, W. Newbury.

Members of Essex Agricultural Society.

DECEMBER, 1894.

Previous printed list was in 1892, corrected in 1893 and in 1894 Reports. If any errors are discovered in the following list, please report them to the Secretary. Trustees are requested to report death of members as soon as they occur, with printed notice, when convenient.

AMESBURY.—25.

Bailey, O. S.	Gale, Foster	Morrill, Geo. T.
Cammet, Samuel	Goodwin, E. A.	Morse, Daniel L.
Chesley, John F.	Hill, Albert C.	Nelson, David O.
Chesley, M. B.	Hill, J. Henry	Sawyer, Aaron jr.
Currier, W. H. B.	Hollander Lambert	Tewksbury, R. R.
Davis, B. Lewis	Huntington, B. F.	Tibbetts, William B.
Feltch, Elbridge S.	Little, J. P.	True, Eben
Gale, Edmund	Lane, T. W.	Vining, William F.
	Mason, John J.	

ANDOVER.—52.

Abbott, James J.	Cheever, James O.]	Jenkins, E. Kendall
Abbott, Nathan F.	Cole, John N.	Johnson, Francis H.
Abbott, Hartwell B.	Cummings, C. O.	McLawlin, Henry
Abbott, John B.	Downing, Mrs. J. J.	Moor, J. Warren
Albeget, Lewis	Eames, Plato	Noyes, Henry P.
Andrews, M. C.	Flint, John H.	Poor, Joseph W.
Bailey, Moses A.	Foster, George W.	Playdon, Alfred G.
Bailey, Samuel H.	Foster, Moses	Rea, Jasper
Blunt, Charles C.	Foster, George C.	Ripley, George
Blunt, Joseph H.	Foster, F. H.	Smith James B.
Buchan, George	Gould, Milo H.	Smith, John L.

Hill, E. L., Templeton, Mass.
Hill, Mark F., Derry, N. H.
Holt, H. E., Lexington
Hubbard, J.G., Hampste'd, N.H.
Hutchinson, C. H., Rhinebeck, N. Y.
Johnson, James T., Waltham
Kent, Albert S., Colorado
Kimball, Jonathan, Boston
Kimball, W.F., Providence, R.I.
King, D. Webster, Boston
Knight, J. M., Maine
Lamb, Wm. D., Southbridge
Lake, Chas. H., Churchill, Md.
Stone, Edwin M., Prov., R. I.
Tappan, S. B , Arlington
Taylor, George H., Everett
Trask, Alfred M., Brockton
Walker, Dexter M., Boston
Ward, Winsor M., Wakefield
Ware, Darwin E., Boston
Webb, Michael, jr., Cambridge
Wentzel, David, Amherst
Wheeler, H. T., Worcester
Whitman, F. A., Lexington
Whittemore, Chas. A., Boston
Whittemore, J. R., Chicopee
Wilder, S. W., Lowell

Total number, December, 1892—1374 resident members.
142 non-resident members. Grand total, 1516 members.

List of Premiums Awarded 1894.

FAT CATTLE.

James C. Poor, No. Andover, pair fat oxen, first prem., $7 00
James C. Poor, No. Andover, best fat ox, first premium, 5 00

BULLS.

Isaac C. Day, Boxford, Ayrshire, first premium, $7 00
A. E. Towne, Georgetown, Guernsey, first premium, 7 00
Robert Foss, Hamilton, Jersey, first premium, 7 00
James C. Poor, No. Andover, Holstein, first premium, 7 00
Horace Moody, West Newbury, Jersey, first premium, 5 00
Cochickewick Farm, No. Andover, Ayrshire, first prem., 5 00
James C. Poor, No. Andover, Holstein, first premium, 5 00
James C. Poor, No. Andover, Holstein, second premium, 3 00
C. K. Ordway & Son, West Newbury, Holstein, second premium, 5 00
M. H. Connor, West Newbury, Ayrshire, second prem., 3 00

MILCH COWS.

James C. Poor, No. Andover, Holstein cow, first premium, $10 00
James C. Poor, No. Andover, Holstein cow, second premium, 5 00
James F. Poor, No. Andover, Grade cow, first premium, 8 00
James C. Poor, No. Andover, Grade cow, second premium, 4 00
M. H. Connor, West Newbury, Ayrshire cow, first premium, 8 00
M. H. Connor, West Newbury, Ayrshire cow, second premium, 4 00

HERDS OF MILCH COWS.

James C. Poor, No. Andover, 6 Holstein and Grade cows, first premium, $15 00

Thomas Sanders, Haverhill, 6 cows, second premium, 10 00

HEIFERS, PURE BRED.

James C. Poor, No. Andover, Holstein, first premium, $5 00

James C. Poor, No. Andover, Holstein, first premium, 5 00

C. K. Ordway & Son, West Newbury, Holstein, second premium, 3 00

C. K. Ordway & Son, West Newbury, Holstein, second premium, 3 00

J. D. W. French, No. Andover, Ayrshire, first premium, 5 00

J. D. W. French, No. Andover, Ayrshire, first premium, 5 00

J. D. W. French, No. Andover, Ayrshire, second prem., 3 00

M. H. Connor, West Newbury, Ayrshire, second prem., 3 00

HEIFERS, NATIVE OR GRADE.

James C. Poor, No. Andover, Grade Holstein, first premium, $7 00

John F. Swapp, West Newbury, Grade Holstein, second premium, 5 00

Horace Moody, West Newbury, Grade Ayrshire, first premium, 5 00

Charles W. Webster, Haverhill, Grade Holstein, first premium, 5 00

James C. Poor, No. Andover, Grade Holstein, second premium, 3 00

Horace Moody, West Newbury, Grade Ayrshire, second premium, 3 00

WORKING OXEN AND STEERS.

C. K. Ordway & Son, West Newbury, working oxen, first premium, $10 00

Horace Moody, West Newbury, working steers, first premium, 8 00

STEERS.

W. H. Poor, West Newbury, 3 year old steers, first premium, $7 00

Horace Moody, West Newbury, 2 year old steers, first premium, 6 00

George Flook, West Newbury, 3 year old steers, second premium, 5 00

TEAM USED ON FARM.

W. E. Merrill, West Newbury, 3 pair horses, first premium, $5 00
Fred A. Russell, Methuen, 2 pair horses, second prem., 3 00
C. K. Ordway & Son, West Newbury, 2 pair oxen, first premium, 5 00

STALLIONS, FARM AND DRAFT.

J. W. Carlisle, Ipswich, Percheron, second premium, $6 00

STALLIONS FOR DRIVING PURPOSES.

L. K. Morse, Haverhill, with 5 of his stock, second premium, $10 00
L. K. Morse, Haverhill, chestnut stallion, second premium, 6 00

FAMILY HORSES.

John O'Connor, West Newbury, first premium, $8 00
John C. Day, Bradford, second premium, 6 00
Morris S. Hill, Methuen, third premium, 4 00

RROOD MARES, FARM AND DRAFT.

Charles C. Batchelder, Groveland, first premium, $10 00

SINGLE FARM HORSES.

A. W. Butrick, Haverhill, first premium, $8 00
J. D. W. French, No. Andover, first premium, 8 00
M. M. Jaques, Groveland, second premium, 6 00
James C. Poor, No. Andover, second premium, 6 00

PAIRS FARM HORSES WEIGHING OVER 2,500 LBS.

W. G. Webb, Haverhill, first premium, $8 00
A. M. Robinson, No. Andover, second premium, 6 00

PAIRS FARM HORSES WEIGHING LESS THAN 2,500 LBS.

M. H. Connor, West Newbury, first premium, $8 00
George C. Carr, West Newbury, second premium, 6 00

COLTS, FARM PURPOSES.

John C. Day, Bradford, first premium, $7 00
Isaac C. Day, Boxford, first premium, 7 00

James C. Poor, No. Andover, second premium, 5 00
R. Jaques, Newbury, second premium, 5 00
S. F. Newman, Newbury, first premium, 5 00

COLTS FOR DRIVING PURPOSES.

Edwin H. George, Groveland, first premium, $7 00
J. H. Nason, Boxford, first premium, 7 00
A. H. Adams, Haverhill, second premium, 5 00
L. C. Pemberton, Groveland, second premium, 5 00
A. Lincoln Lewis, Bradford, first premium, 5 00
———Barro, Bradford, first premium, 5 00
Geo. B. Parkhurst, Boxford, second premium, 3 00
Sylvester P. Smith, Haverhill, second premium, 3 00

SWINE, LARGE BREEDS.

Charles H. Leach, Topsfield, Chester sow and pigs, first premium, $6 00
Chas. T. Balch, Groveland, Yorkshire sow and pigs, first premium, 6 00
Horace Moody, West Newbury, Grade sow and pigs, first premium, 6 00
A. W. Buttrick, Haverhill, Berkshire sow and pigs, first premium, 6 00
A. W. Buttrick, Haverhill, Berkshire boar, first prem., 6 00
E. G. Nason, West Newbury, weaned pigs, first prem., 6 00
W. L. Hill, Peabody, Cheshire sow and pigs, first prem., 6 00
W. L. Hill, Peabody, Chester white boar, first premium, 6 00
W. L. Hill, Peabody, Cheshire boar, first premium, 6 00
W. L. Hill, Peabody, Yorkshire boar, first premium, 6 00
W. L. Hill, Peabody, Chester sow and pigs, second premium, 4 00
W. L. Hill, Peabody, Yorkshire sow and pigs, second premium, 4 00
W. L. Hill, Peabody, Berkshire boar, second premium, 4 00
Isaac C. Day, Boxford, weaned pigs, second premium, 4 00

SWINE, SMALL BREEDS.

W. L. Hill, Peabody, Yorkshire boar, first premium, $6 00
W. L. Hill, Peabody, Yorkshire sow and pigs, second premium, 4 00

SHEEP.

Richard Newell, West Newbury, Southdown buck, first premium, 8 00
Richard Newell, West Newbury, 10 Grade sheep, first premium, 8 00
J. D. W. French, No. Andover, 10 Grade Shropshire sheep, first premium, 8 00
J. D. W. French, No. Andover, 5 Grade Oxfordown lambs, first premium, 5 00
Isaac C. Day, Boxford, 4 Southdown lambs, first premium, 5 00
Isaac C. Day, Boxford, 10 Grade Southdown sheep, second premium, 6 00
M. H. Toomey, Newbury, 4 lambs, second premium, 3 00

PLOUGHING WITH DOUBLE TEAM.

C. K. Ordway & Son, West Newbury, first premium, 10 00

PLOUGHING WITH DOUBLE TEAM, SWIVEL PLOUGH.

James C. Poor, No. Andover, first premium, 8 00

PLOUGHING WITH HORSES, ANY PLOUGH EXCEPT SWIVEL.

F. H. Poor, West Newbury, 4 horses, first premium, 8 00
Carlton Little, Newbury, 2 horses, first premium, 8 00
W. E. Merrill, West Newbury, 2 horses, second premium, 6 00
John F. Hills, West Newbury, 2 horses, third premium, 4 00

PLOUGHING WITH TWO HORSES, SWIVEL PLOUGH.

A. M. Robinson, No. Andover, first premium, 8 00
M. H. Carr, West Newbury, second premium, 6 00

PLOUGHING WITH THREE HORSES.

W. E. Merrill, West Newbury, first premium, 8 00

PLOUGHING WITH SULKY PLOUGH.

Fred A. Russell, Methuen, first premium, 8 00

PLOUGHING BY BOYS.

Charles S. Little, Haverhill, first premium, 8 00

GRAIN CROPS.

Nathan Longfellow, Groveland, crop of corn, first premium, 10 00
Fred A. Stultz, West Newbury, crop of corn, second premium, 5 00
Charles C. Blunt, Andover, crop of rye, first premium, 10 00

SMALL FRUITS.

J. H. Nason, Boxford, crop of strawberries, first premium, 10 00
W. K. Cole, Boxford, crop of raspberries, first premium, 10 00
Amos Haseltine, Haverhill, crop of currants, first premium, 10 00
Amos Haseltine, Haverhill, crop of blackberries, first premium, 10 00

ROOT CROPS.

Charles C. Blunt, Andover, crop of carrots, first premium, 10 00
Charles C. Blunt, Andover, crop of parsnips, first premium, 10 00
Fred A. Russell, Methuen, crop of parsnips, second premium, 5 00
Fred A. Russell, Methuen, crop of beets, first premium, 10 00
Fred A. Russell, Methuen, crop of potatoes, second premium, 5 00
Fred A. Russell, Methuen, crop of squash, first premium, 10 00
Fred A. Russell, Methuen, crop of cabbage, second premium, 5 00
John H. George, Methuen, crop of onions, first premium, 10 00
J. H. Lunt, Newbury, crop of onions, second premium, 5 00
Nathan Longfellow, Groveland, crop of potatoes, first premium, 10 00
David Warren, Swampscott, crop of cabbage, first premium, 10 00

IMPROVING WET MEADOW AND WASTE LAND.

Otis F. Putnam, Danvers, waste land, first premium, 15 00
George J. Pierce, West Newbury, waste land, second premium, 10 00

OTHER AWARDS.

Awarded	by	Committee	on	Granges,	25 00
"	"	"	"	Roads,	20 00
"	"	"	"	Poultry,	150 00
"	"	"	"	Harrows,	14 00
"	"	"	"	Agricultural Implements,	36 50
"	"	"	"	Dairy,	24 00
"	"	"	"	Carriages,	28 00
"	"	"	"	Bread and Canned Fruit,	24 00
"	"	"	"	Honey,	6 00
"	"	"	"	Pears,	65 00
"	"	"	"	Apples,	84 50
"	"	"	"	Peaches, Grapes, etc.,	91 25
"	"	"	"	Plants and Flowers,	76 75
"	"	"	"	Vegetables,	150 00
"	"	"	"	Grain and Seed,	27 00
"	"	"	"	Counterpanes and Afghans,	25 00
"	"	"	"	Carpets and Rugs,	22 00
"	"	"	"	Manf. from Leather,	24 00
"	"	"	"	Manf. and General Mdse.,	14 00
"	"	"	"	Fancy Work,	50 00
"	"	"	"	Art Work,	47 00
"	"	"	"	Work by Children,	15 50

RECAPITULATION.

Awarded for ploughing,		$82 00
FARM STOCK.		
Awarded for Fat Cattle,	$12 00	
" " Bulls,	54 00	
" " Milch Cows,	39 00	
" " Herds of Milch Cows,	25 00	
" " Heifers,	60 00	
" " Working Oxen and Steers,	18 00	
" " Steers,	18 00	
" " Teams used on Farms,	13 00	
" " Horses,	175 00	
" " Swine,	86 00	
" " Sheep,	43 00	
" " Poultry,	150 00	
		$693 00
FIELD AND EXPERIMENTAL CROPS.		
Awarded for Grain Crops,	25 00	
" " Root Crops,	90 00	
" " Fruit Crops,	40 00	
		$155 00
FARM AND GARDEN PRODUCTS.		
Awarded for Grain and Seed,	$27 00	
" " Vegetables,	150 00	
" " Fruits,	240 75	
" " Plants and Flowers,	76 75	
		$494 50
DAIRY PRODUCTS.		
Awarded for Butter,	$19 00	
" " Dressed Poultry and Eggs,	5 00	
		$24 00

DOMESTIC MANUFACTURES.

Awarded for	Bread, Canned Fruit, etc.,	$30 00	
" "	Counterpanes and Afghans,	25 00	
" "	Carpetings and Rugs,	22 00	
" "	Articles Manuf. from Leather,	24 00	
" "	Manuf. and General Mdse.,	14 00	
" "	Fancy Work,	50 00	
" "	Work of Art,	47 00	
" "	Children's Work,	15 50	
			$227 50

MISCELLANEOUS.

Awarded for	Agricultural Implements,	$50 50	
" "	Granges,	25 00	
" "	Roads,	20 00	
" "	Carriages,	28 00	
" "	Improving Waste Land,	25 00	
" "	Essays and Reports,	8 00	
			$156 50

TOTAL.

The amount of $1,834.50 was awarded to 361 individuals and firms in 28 different cities and towns in the county as follows:

Amesbury,	$66 50	Methuen,	$99 75
Andover,	30 50	Merrimac,	19 00
Beverly,	5 00	Middleton,	4 25
Boxford,	120 50	Newbury,	94 00
Bradford,	52 25	Newburyport,	26 00
Danvers,	57 00	North Andover,	212 25
Georgetown,	40 75	Peabody,	57 00
Groveland,	103 00	Rockport,	3 00
Hamilton,	8 00	Rowley,	19 50
Haverhill,	376 25	Salem,	12 25
Ipswich,	6 00	Salisbury,	5 00
Lawrence,	53 50	Swampscott,	10 00
Lynn,	58 25	Topsfield,	10 00
Marblehead,	5 00	West Newbury,	278 00

FINANCIAL STATEMENT.

Receipts for Admission to Hall,	$1055 75	
" " " " Dinner,	123 00	
" " Grounds for various purposes,	3 70	
		$1182 45
Expenses, at Hall and grounds, including Dinner,		769 06
Amount paid Treasurer,		$383 39

1895.

PREMIUM LIST OF

Essex Agricultural Society,

FOR THE

SEVENTY-FIFTH ANNUAL CATTLE SHOW AND FAIR.

Duties of Trustees.

The trustee of each town is instructed to see the several members of Committees in his town previous to the Show, and urge upon them the importance of attending to their duties. Also impress upon exhibitors from localities near to the Exhibition, the importance of entering their exhibits for the hall, the afternoon and evening of Monday, in fairness to those from a distance, who are obliged to come Tuesday.

To be prompt at the meeting in June for filling Committees, and at the meeting of the Society for filling vacancies in committees on the first day of the Exhibition, making sure that the names proposed at those meetings are of persons who will serve.

Duties of Committees.

Committees on live stock and articles exhibited on the Fair Grounds should appear at the Secretary's office on the grounds, at one o'clock, punctually, on the first day of the exhibition, and there organize, take the books of entry, and proceed at once to business. Committees in hall, should take the books of entry from the Superintendent, promptly after the entries close.

Full reports of awards by committees, on the blanks furnished by the Secretary, to be signed by all the members acting on the same, are required of each committee.

Three members of any committee consisting of more than that number are authorized to act.

☞No member of the Society shall act on any committee of which he is an exhibitor in the same class.

The Diploma of the Society being considered the highest premium that can be awarded, no committee is authorized to award it, except for animals and articles *of special merit*, deserving of indorsement and recommendation by the Society.

No committee is authorized to award gratuities, except the committee on agricultural implements, carriages, bread, honey and canned fruits, domestic manufactures, fruits, vegetables in hall, and flowers ; or any premium, unless the rules of the Society have been strictly complied with. Neither shall they award premiums or gratuities in excess of the amount appropriated.

No gratuity is to be awarded of less than fifty cents.

The several committees are requested to affix premium cards, and also on animals, blue, white and red printed premium ribbons (which may be had of the Secretary or assistant on the grounds and at the hall), for the several animals or articles designating the grade of premium awarded each, and the name of the person to whom awarded, and special care should be taken that the cards issued correspond with the awards in their report to the Society.

The reports of awards of premiums on ploughing and on animals and articles exhibited at the Show, must be delivered promptly to the Secretary for announcement on Thursday.

The Society offers liberal premiums for the best reports of committees ; and the chairmen of the several committees are requested to present to the Secretary a full report explanatory of the opinions of the committee on the matter referred to them, within two weeks after the awards are made at the Show, for publication in the Transactions.*

Reports on farms, crops, etc., to be presented previous to the meeting of the Trustees in November.

Any member of a committee who cannot serve on the same *is requested to give notice* to the Secretary, *before the Show*, so that the vacancy may be filled.

Each member of the several committees will receive a ticket of admission to the hall of exhibition, on application to the Secretary.

*Chairmen of committees will please notice this request.

General Rules.

Competitors are requested to carefully read the rules and premium list before making entries.

Claims (entries) for premiums to be awarded at the Exhibition on the Fair Grounds, other than live stock, must be entered with the Secretary of the Society, or his agent, and in the Exhibition Hall, on or before 11 A. M., of the first day thereof.

All entries of live stock must be entered with the Secretary at least one week previous to the holding of the Fair, and no entries will be received after that date.

Any person *not a member of the Society*, awarded seven dollars and upwards, shall receive a certificate of membership, for which three dollars of his award will be taken to increase the funds of the Society.

Diplomas awarded will be delivered and premiums paid, to the person to whom the premium or gratuity is awarded, or an agent duly authorized, on application to the Treasurer, at First National Bank, Salem, on and after the fourth Monday of November.

All premiums and gratuities awarded, the payment of which is not demanded of the Treasurer on or before the first day of September next succeeding the Exhibition, will be considered as given to increase the funds of the Society.

In all cases the reports of awards of premiums and gratuities made by the several committees and adopted by the Society shall be final. *Committees should see that the premium cards issued, correspond with the premiums and gratuities awarded in their reports.*

No person shall be entitled to receive a premium, unless he complies with the conditions on which the premiums are offered, and by proper entry as required, gives notice of his intention to compete for the same ; and committees are instructed to award no premium unless the animal or article offered is worthy.

No animal or object that is entered in one class, with one committee, shall be entered in another class, except town teams, working oxen, working steers, (three year old steers may be entered for ploughing in a double team) and farm horses which may be entered for ploughing, and milch cows, which may be entered with a herd.

In regard to all subjects for which premiums are offered, it is to be distinctly understood that the Trustees reserve to themselves the right of judging the quality of the animal or article offered ; and that no premium will be awarded unless the objects of them are of decidedly superior quality.

Pure Bred Animals, defined by the State Board of Agriculture.

The proof that an animal is so bred should be a record of the animal or its ancestors, as recorded in some herd book, recognized by leading breeders and the public generally, as complete and authentic.

Standards adopted :—American Jersey C. C. Register and American Jersey Herd Book, Ayrshire Record and Holstein Herd Book.

Premiums to be Awarded at the Show.

The Committees will take notice that no premium will be awarded unless the animals or objects are of a decidedly superior quality.

DIPLOMAS may be awarded for ANIMALS OR ARTICLES of *special* merit, in all departments of the Fair.

Cattle and other Farm Stock.

TO BE ENTERED IN THE NAME OF THEIR REAL OWNER.

All animals to be eligible to a premium, shall have been raised by the owner within the County, or owned by the exhibitor within the County, four months previous to the date of Exhibition, except Working Oxen and Working Steers.

All animals, whether teams for ploughing, or animals entered for premium or exhibition, will be fed during the Exhibition, and longer when they are of necessity prevented from leaving, at the expense of the Society.

BULLS.

*Ayrshire, Jersey, Short Horn, Devon, Holstein, Guernsey, or of any other recognized breed, for each breed.

Two years old and upwards, premiums, $6, 4

Under two years, for each breed, $4, 3

BULLS OF ANY AGE OR BREED.

For the best bull of any age or breed, with five of his stock not less than one year old, quality and condition to be taken into account, and especially the adaptability of the animal to the agriculture of the county. Diploma and $8

NOTE.—Competitors are required to give a written statement of pedigree, and committees are requested to be particular in this respect, and return them to the Secretary with report.

MILCH COWS.

For Milch Cows, either Foreign, Native or Grade, with satisfactory evidence as to quantity and quality of milk by weight during one full month, premiums, $8, 5

Milch Cows, Ayrshire, Jersey, Devon, Short Horn, Holstein, Guernsey, or any other recognized breed, four years old and upwards, premiums for each breed, $7, 4

For Native or Grade Cows, four years old and upwards, premiums, $7,4

For the cows that make the most butter in a single week from June 1st to September 15th, premiums, $7, 4

NOTE.—A written statement will be required of the age and breed of all Milch Cows entered, and time they dropped their last calf, and when they will next calve, the kind, quality and quantity of their food during the season, and the manner of their feeding, which statement is to be returned to the Secretary with Committee's report.

HERDS OF MILCH COWS.

For herds of Milch Cows, not less than five in number, to be exhibited at the Show, and a correct statement of manner of keeping and yield for one year preceding the Show, premiums,

Diploma and $10, 8

For the greatest produce of milk on any farm, in proportion to the number of cows producing it, not less than four, from April 1, 1894 to April 1, 1895, statement to be made of the exchanges made, manner, and expense of food, use made of milk, and such other facts as will illustrate the entire management, special regard being had to the mode in which the account is kept, premium,

Diploma and $8

NOTE.—The above-mentioned statements are to be returned to the Secretary with Committee's report. The Committee can accept statements dating from January 1st, preceding the Show.

HEIFERS.

First Class.—Ayrshire, Jersey, Short Horn, Devon, Holstein, Guernsey, or any other recognized breed, under four years old in milk, premiums for each breed, $5, 3

Two years old of each breed, that have never calved, premiums, $4, 2

One year old and under, of each breed, premiums, $4, 2

Second Class.—Native or Grade Milch, under four years old, premiums, $5, 3

Two years old, that have never calved, premiums, $4, 2

One year old and under, and less than two, premiums, $4, 2

WORKING OXEN AND STEERS.

Stags excluded. For pairs of Working Oxen under eight and not less than five years old, taking into view their size, power, quality and training, premiums, $8, 6

For pairs of Working Strees, four years old, to be entered in the name of the owner, premiums, $6, 4

Note.—The Committee are required to consider the quality and shape of the cattle as well as their working capacity. The training of working oxen and steers will be tested by trial on a cart or wagon containing a load weighing two tons for oxen, and three thousand pounds for steers. ☞At the time of entry a certificate of the weight of the cattle must be filed with the Secretary.

FARM TEAMS.

For the best Farm Team of not less than two pairs of Oxen, or two pairs of Horses, owned and used on one farm, premiums, $5, 3

STEERS.

For pairs of three year old Steers, broken to the yoke, premiums, $5, 3

For pairs of two year old Steers, premiums, $4, 2

For pairs of yearling Steers, and under, premiums, $3, 2

STALLIONS, FARM AND DRAFT.

For Stallions for Farm and Draft purposes, four years old and upwards, diploma, or premiums, $8, 5

For Stallions for Farm and Draft purposes, three years old, premiums, $5, 3

For best Stallion of any age, and five colts of his stock, not less than five years old, quality and condition to be taken into account, Diploma and $8

STALLIONS FOR DRIVING PURPOSES.

For Stallions for Driving purposes, four years old and upwards, premiums, Diploma and $8, 5

For Stallions for Driving purposes, three years old, premiums, Diploma and $5, 3

For best Stallion of any age and five colts of his stock, not less than one year old, quality and condition taken into account, Diploma and $8

Note.—No stallion will be entitled to a premium unless free from all apparent defects capable of being transmitted. All stallions entered in either class must have been owned by the exhibitor four months previous to the exhibition.

BROOD MARES, FARM AND DRAFT PURPOSES.

For Brood Mares for Farm and Draft Purposes, with their foal not more than eight months old, by their side, premiums, $8, 5

BROOD MARES, DRIVING PURPOSES.

For Brood Mares for Driving Purposes, with their foal not more than eight months old, by their side, premiums,

NOTE.—No brood mare will be entitled to a premium unless free from all apparent defects capable of being transmitted.

FAMILY HORSES.

For Family Horses, premiums, $6, 4

NOTE.—No horse will receive a premium unless free from all unsoundness.

GENTLEMEN'S DRIVING HORSES.

For Gentlemen's Driving Horses, premiums, $6, 4
For pairs of Gentlemen's Driving Horses, premiums, $8, 5

FARM HORSES.

For Farm Horses, weighing 1,200 lbs. and over, premiums, $6, 4
For Farm Horses, weighing less than 1,200 lbs., premiums, $6, 4

NOTE.—No horse will be allowed except those actually used on farms, whether the owner has a farm or not. The weight of the load to be used in trial of Farm Horses is to be fixed upon by the committee of arrangements for drafting, the difference in the load for horses of 1,200 lbs. and over, and those under 1,200 lbs. to be 1,000 lbs., and between the two classes of pairs 2,000. No obstruction shall be placed either before or behind the wheels in trials of Draft Horses of either class, but wheels shall be blocked behind to hold the load when a team stops going up hill.

PAIRS OF FARM HORSES, WEIGHING 2,500 LBS. AND OVER.

For pairs of Farm Horses weighing 2,500 lbs. and upwards (see above note), premiums, $8, 5

PAIRS OF FARM HORSES, WEIGHING LESS THAN 2,500 LBS.

For pairs of Farm Horses weighing less than 2,500 lbs. (see above note), premiums, $8, 5

COLTS FOR FARM PURPOSES, 3 AND 4 YEARS OLD.

For Mare or Gelding four year old Colts, premiums, $6, 4
For Mare or Gelding three year old Colts, premiums, $5, 3

COLTS FOR FARM PURPOSES, 1 AND 2 YEARS OLD.

For Stallion, Gelding or Mare, two year old Colts, prem., $4, 2
For Stallion, Gelding or Mare, yearling Colts, premiums, $4, 2

COLTS FOR DRIVING PURPOSES.

THREE AND FOUR YEARS OLD.

For Mare or Gelding four year old colts, premiums, $6, 4
For Mare or Gelding three year old colts, premiums, $5, 3

ONE AND TWO YEARS OLD.

For Stallion, Gelding or Mare two year old colts, prem., $4, 2
For Stallion, Gelding or Mare yearling colts, premiums, $4, 2

SWINE,—LARGE BREEDS.

Large Breeds viz : Cheshire, Berkshire, Chester County Whites, Poland China, Large Yorkshire, weighing more than 300 lbs. at maturity.

For Boars, premiums, $5, 3
For Breeding Sows with their pigs by their side, prem., $5, 3
For Litters of Weaned Pigs, not less than four, between two and four months old, premiums, $5, 3

SWINE,—SMALL BREEDS.

Small breeds, such as Suffolk, Essex, Small Yorkshire, China, and any other breed or grade, weighing less than 300 lbs. at maturity.

For Boars, premiums, $5, 3
For Breeding Sows with their pigs by their side, prem., $5, 3
For Litters of Weaned Pigs, not less than four, between two and four months old, premiums, $5, 3

SHEEP.

For flocks of Sheep, not less than ten in number, each Breed, premiums, $5, 3
For best Buck, premium, $5
For lots of Lambs not less than four in number between four and twelve months old, premiums, $4, 2

POULTRY.

For pairs of Fowls, Light Brahmas, Dark Brahmas, Buff Cochins, Partridge Cochins, Black Cochins, White Cochins, Plymouth Rocks, White Plymouth Rocks, Dominiques, White Leghorns, Brown Leghorns, Dominique Leghorns, Black Spanish, Hamburgs, Polish, Games, Dorking, Bantams, Black, White and Mottled Javas, Wyandottes, White Wyandottes, Golden Wyandottes, Black and White Minorcas, Red Caps, Andalusias, Langshangs, and other recognized varieties, each variety, premiums, $1, .50
For pairs of Chickens of above varieties, premiums, $1, .50
For the best breeding pen of each variety—Diploma of the Society.
For the best pairs of Native Fowls, premiums, $1, .50
Pairs can be exhibited in "breeding pens," by marking the competing female (with a ribbon or colored string), which, with the male, will form the pair.
For lots of Turkeys, and Alesbury, Rouen, Caouga, Pekin, White and Colored Muscovey, and Brazilian Ducks, and Toulouse, Emden, Brown China, and African Geese, premiums, $1, .50
Any exhibitor interfering with the Judges in the discharge of their duties or interfering with, or handling any specimen on exhibition, other than his own, shall forfeit all claim he may have in the premium list.

All breeds exhibited separately and to be judged by the rules of the "American Standard of Excellence."

For best exhibit of Poultry Appliances, $4

NOTE.—Diploma only awarded for Breeding Pens.

PLOUGHING.

GENERAL NOTE ON PLOUGHING.—Stags are excluded. Teams must be entered in the names of their owners, and only double ox-teams to have drivers. A team consisting of one pair of oxen and a horse will be considered a double team. The owners of separate teams may unite the same and be allowed to compete for premiums. The ploughmen and drivers must have been residents of the County at least three months before the exhibition. Those who intend to be competitors must give notice to reach the Secretary on or before Saturday previous to the show. The lands will be staked, but each ploughman will be required to strike out his own lands in the presence of "Committee on Striking Out Grounds for Ploughing," after half past nine o'clock in the morning of the trial. Ploughmen with land side ploughs are to back furrow three furrows on each side of the stakes set, the last furrow to be of the depth required in the class. Ploughmen, with swivel ploughs to turn the outside of their furrow to the stakes on one side, and to finish one foot from the stake on the other. Committees to note and report the kind of plough used.

PLOUGHING WITH DOUBLE OX-TEAMS.—One eighth of an acre, at least eight inches deep, premiums, $8, 6

PLOUGHING WITH SINGLE OX-TEAMS.—One-eighth of an acre at least six inches deep, premiums, $6, 4

PLOUGHING WITH TWO HORSES.—With any form of Plough except Swivel, one-eighth of an acre, at least six inches deep, premiums, $6, 4

PLOUGHING WITH THREE HORSES.—One-eighth of an acre, eight inches deep, without driver, premium, $6

Same with four horses, with driver, premium, $6

PLOUGHING WITH SWIVEL PLOUGH.—One-eighth of an acre, with double ox-teams, at least eight inches deep, premiums, $6, 4

One-eighth of an acre with single ox-teams, at least six inches deep, premiums, $6, 4

One-eighth of an acre with horse teams, consisting of two horses, ploughing at least six inches deep, premiums, $6, 4

PLOUGHING SULKY PLOUGH.—For the best performances, taking into account ease of draft, amount and quality of work,

Sulky Plough, Landside, premiums, $6, 4

Ploughing by boys under 15 years of age, premiums, $6, 4

HARROWS.

For the best Harrow exhibited, and its merits shown by actual test upon the ploughed ground, $6, 4

NOTE.—Entry must be made with the Secretary before the day of the trial with description of the Harrow.

AGRICULTURAL IMPLEMENTS.

For the best collection of Implements and Machines (no article offered in *collection* will be entitled to a separate premium), Diploma and $8

Best Market Wagon, premium, $4

Best Farm Wagon, for one or two horses, premium, $3

Best Horse Cart, premium, $3

Best Hay, Straw or Corn Cutter, premium, $1

Best Fruit Evaporator, with sample of work, premium, $4

For implements not specified above, the Committee may at their discretion, award $25.

No premium or gratuity will be awarded for any Mower, Horse Rake, Tedder, or other Machine or Implement, the merit of which can be known only by actual trial in the field; but manufacturers are invited to offer the same for exhibition and inspection.

CARRIAGES.

For carriages built in the County, and exhibited by the manufacturer, Diploma, and twenty-five dollars in gratuities, may be awarded by the Committee.

In Exhibition Hall.

Committees on articles exhibited in the hall should be especially careful that the premium or gratuity cards issued with the names, and sums awarded them, correspond with those in their reports to the Society.

Committees and Exhibitors will be governed by instructions, under heading of "Duties of Committee," "General Rules," "Premiums to be awarded at the Show," see first pages, and under "Fruit," "Domestic Manufactures," and "Flowers."

☞All Fruit, Flowers, Vegetables and Domestic Manufactures, must be the product of Essex County, to be entitled to a premium or gratuity.

GRANGE EXHIBIT.

The Society offers seventy dollars to be divided in four premiums for exhibits by the different Granges in Essex County, as follows:—Premiums, $20, 15, 10

NOTE.—This exhibit includes all Fruit, Vegetables and Domestic Manufactures that are exhibited in any other department in Exhibition Hall.

DAIRY.

For specimens of Butter made on any farm within the County the present year, samples of not less than five pounds to be exhibited, with a full account of the process of making and management of the Butter, premiums, $5, 3

For Specimens of New Milk Cheese, made on any farm in the County the present year, samples of not less than fifty pounds to be exhibited, with statement in writing of the method of making and preserving the same, premiums, $5, 3

NOTE.—Each lot presented for premium and the statement accompanying it, must be numbered, but not marked so as to indicate the claimant; any public or known mark must be completely concealed nor must the competitors be present at the examination.

BREAD AND CANNED FRUIT.

For White Bread made of Wheat flour, premiums, $2, 1

For bread made from Graham flour, premiums, $2, 1

For bread made from other grains, or other grains mixed with wheat, premiums, $1.50, 1

All bread, entered for premiums, to be in loaves weighing not less than one pound each, and not to be less than twenty-four hours old, with a full written statement over the signature and address of the maker, stating the kind of flour used, quantity of each ingredient, how mixed, and length of time kneaded and raised, and how long baked, *which statements on all premium bread are to be sent to the Secretary with report of the Committee for publication.*

For first and second best collection of Pickles, Preserved Fruits, and Jellies made from products of the County, *when premiums are awarded, the method of making to be sent to the Secretary by the Committee for publication,* premiums, $2, 1

For the first and second best five pounds of Dried Apples, grown and dried within the County, with statements of process used and amount of labor and time required in preparing and drying, *such statement on premium fruit to be given to the Secretary for publication,* premiums, $2, 1

In addition to the above, are placed in the hands of the Committee for gratuities on other articles entered in this department, products of this County, deemed worthy, $5

BEES, HIVES AND HONEY.

For the first and second best display of Bees, Hives and Apiarian Implements, accompanied with a written description of the bees, hives, etc., number of hives in use and amount of surplus honey taken from them during the season, premiums, $4, 2

First and second best Honey, ten pounds in comb and one pound extracted, made in the County, with statement signed of kind of bees and hive, and time of year when honey was made, premiums, $2, 1

Fruit.

All fruit must be entered in the name of the grower before 11 o'clock on the first day of the exhibition, and each exhibitor must certify to the same on the Entry Book, or on lists of the varieties of each class of fruit, or be filed when entry is made. (Committees are not authorized to make awards to those who do not comply with this rule.)

Tables will be labelled in a *conspicuous manner* by the hall committee *before the entry of exhibitors,* with the names of fruit, for which premiums are offered, all others of same class fruit to be labelled miscellaneous. Exhibitors must place their several varieties of each class of fruit where indicated by such labels, or be considered by the committee as not competing for premium.

Plates of collections of fruit, when premiums are offered therefor, must be entered and placed by the exhibitor on the table assigned for the exhibit of collections of fruit.

To entitle exhibitors to receive premiums and gratuities awarded, they are required (when requested by the committee) to give information in regard to the culture of their fruit.

PEARS.

For best twelve specimens of the following varieties, which are ecommended for cultivation in Essex County: Bartlett, Belle

Lucrative, Bosc, Anjou, Angouleme, Dana's Hovey, Lawrence, Onondaga, Seckle, Sheldon, Urbaniste, Vicar, Comice, Howell and Clairgeau, each, premium, $2

Doyenne d'Ete, Gifford and Clapp's Favorite (ripening early), are recommended for cultivation, but no premium is offered.

For each dish of twelve best specimens of any other varieties, deemed worthy by the committee, premium, $1.50

For best collection of Pears, recommended for cultivation, premium, $5

In addition to the above are placed at the disposal of the committee, to be awarded in gratuities of not less than $1 each, $15

APPLES.

For best twelve specimens of the following varieties, which are recommended for cultivation in Essex County: Baldwin, Danvers Sweet, Tompkins King, Red Russett, Tolman's Sweet, Hubbardston, Hurlburt, Porter, Pickman Pippin, Roxbury Russett, Rhode Island Greening, Gravenstein, Hunt Russett, Smith's Cider, Snow, Bailey Sweet, premium for each, $2

Red Astrachan, William's Favourite, Tetofsky and Sweet Bough are recommended for cultivation, but no premium is offered (ripening early.

For best twelve specimens of any other varieties deemed worthy by the committee, premium for each variety, $1.50

For best collection of Apples, recommended for cultivation, premium, $5

For best twenty-four specimens of any variety of Crab Apple deemed worthy by the committee, $1.50

In addition are placed at the disposal of the committee, to be awarded in gratuities of not less than $1 each, $15

PEACHES, GRAPES, AND ASSORTED FRUITS.

For best nine specimens of Freestone, White Flesh, Yellow Flesh, Essex County Seedling, each variety, $2

For best collection of Peaches, premium, $3

For Champion, Lemon, or Orange Quinces, premium, $2

For Plums, five varieties to be selected by Committee, each variety, premium, $2

For best four bunches of Concord, Worden's Seedling, Brighton, Green Mountain, Delaware, Martha, Moore's Early, Niagara Grapes, each variety, premium, $2

For Cold House Grapes, produced with not over one month's artificial heat, premiums, $3, 2

For best collection of ten varieties, not less than ten pounds in all, premiums, $5

For best specimens of four bunches of Grapes, varieties other than above, deemed worthy by the committee, premium, $1.50

For baskets of Assorted Fruits, premiums, $3, 2

In addition are placed at the disposal of the committee, to be awarded in gratuities, of not less than 50 cents each, $20

Plants and Flowers.

RULES AND REGULATIONS.

1. All Plants and Flowers for competition and exhibition must be entered for examination by the committee on or before eleven o'clock, on the first day of the Fair, and all such Plants and Flowers must have been grown by the competitor, except native plants and flowers, and flowers used in bouquets, and baskets of flowers and floral designs, all of which (plants and flowers) must have been grown within the County.

2. When a certain number or quantity of Plants and Flowers is designated in the schedule, there must be neither more nor less than that number or quantity of specimens shown.

3. When only one premium from each exhibitor is offered for any article, only a single specimen or collection can compete, but when a second or third premium is offered, one, two or three specimens or collections may be exhibited for competition, but no variety can be duplicated.

4. No premium shall be awarded unless the specimens exhibited are of superior excellence, possessing points of superiority and worthy of such premium, not even if they are the only ones of their kind on exhibition.

5. No specimen entered for one premium shall be admitted in competition for another different premium.

6. Competitors will be required to furnish information (if the committee so request), as to their modes of cultivation, or in the case of Native Plants and Flowers, where such were found.

7. All Plants exhibited for premiums must have the name legibly and correctly written on stiff card, wood, or some other permanent and suitable substance and so attached to same as to be easily seen. Flowers when specified to be named to comply also with above rule.

8. Plants in Pots to be entitled to premiums must show skilful culture in the profusion of bloom and in the beauty, symmetry and vigor of the specimens ; also Bouquets, Baskets, Design Work, etc., must show taste, skill, and harmony in arrangement, both as to colors and material they are made of, and purposes for which they are intended.

9. All Flowers exhibited must be shown upon their *own stem*, flowers in "Design" work alone excepted ; and this exception if overcome and avoided, to be taken into account by the committee in awarding the premiums.

10. The Committee are authorized to award gratuities for any new and rare plants and flowers or "Designs of merit for which no premium is offered, but in no case shall the total sum (premiums and gratuities together), exceed the amount, $100.00, limited by the Society for this department.

11. No member of the Committee for awarding premiums or gratuities shall in any case vote or decide respecting an award for which such member may be a competitor, or in which he may have an interest, but in such case such member shall *temporarily* vacate his place upon the Committee, and such vacancy for the time being may be filled by the remaining members of the Committee, or they may act without.

12. Attention is again called to above Rules and Regulations for Plants and Flowers, and General Rules of the Society, and all articles not entered in conformity therewith will be disqualified, and premiums will be awarded only to exhibitors who have complied with said Rules, etc.

PLANTS.

Plants competing for these premiums must have been grown in pots, Native Plants excepted, etc. See Rules.

For collection Flowering and Ornamental Foliage plants, at least 25 specimens, premiums, $5 $3

For collection Palms, at least 5 specimens, 5 varieties, prem., $1

For collection Ferns (cultivated), at least 5 specimens, 5 varieties, premium, $1

For collection Dracenas, at least 5 specimens, 5 varieties, premium, $1

For collection Crotons, at least 5 specimens, 5 varieties, prem., $1

For collection Fancy Caladiums, at least 5 specimens, 5 varieties, premium, $1

For collection Gloxinias, at least 5 specimens, 5 varieties, premium, $1

For collection Begonias, tuberous-rooted, at least 5 specimens, 5 varieties, premium, $1

For collection Begonias, 5 specimens, 5 varieties, premium, $1

For collection Coleus, 10 specimens, 10 varieties, premium, $1

For collection Fuschias, 5 specimens, varieties, premium, $1

For collection Cyclamen, 5 specimens, 5 varieties, premium, $1

For collection Geraniums, double, 10 specimens, 10 varieties, premium, $1

For collection Geraniums, single, 10 specimens, 10 varieties, premium, $1

For collection Geraniums, fancy, 10 specimens, at least 5 varieties, premium, $1

For collection Hibiscus, 5 specimens, 5 varieties, premium, $1

For collection Carnation Pinks, 10 specimens, at least 5 varieties, premium, $1

For collection Calla Lilies, 5 specimens, premium, $1

For specimen English Ivy, premium, $1

For collection of wood of native trees in sections, suitable for exhibition, showing bark and the grain of the wood, all correctly named with botanical and common name, at least 50 varieties, each variety to be shown in two sections, one of which to be a cross section and neither to be more than four inches in length or diameter, premiums, $5, 3

FLOWERS.

For collection Cut Flowers, cultivated, 100 specimens, at least 50 varieties, named, $3, 2

For collection Cut Flowers, native, 100 specimens, at least 50 varieties, named, $3, 2

For pair of Bouquets, for vases, green-house flowers, prem., $1, .50

For pair of Hand Bouquets, green-house flowers, prem., $1, .50

For pair of Bouquets, for vases, of native flowers, prem., $1, .50

For pair of Bouquets, for vases, of garden flowers, prem., $1, .50

For Basket of green-house flowers, premiums, $1, .50
For Basket of Native Flowers, premiums, $1, .50
For Basket of Garden Flowers, premiums, $1, .50
For arrangement of Native Flowers and Autumn Leaves, premiums, $2, 1
For Floral Designs, choice cultivated flowers, premiums, $3, 2
For Floral Designs, native flowers, premiums, $2, 1
For collections Japan Lilies, hardy, named, premiums, $2, 1
For collections Phlox, hardy perennial, named, premiums, $2, 1
For collections Pansies, at least 50 specimens neatly and artistically arranged, premiums, $2, 1
For collections of Native and Introduced Weeds, with common and botanical name attached, premiums, $2, 1
For twelve Dahlias, large flowering, at least six varieties, named, premium, $1
For twelve Dahlias, Pompon or Lilliputian, at least six varieties, named, premium, $1
For twelve Dahlias, single, at least six varieties, named, premium, $1
For twelve Petunias, double, at least six varieties, named, premium, $1
For twelve Gladiolas (spikes), at least six varieties, named, premium, $1
For twelve Japan Lilies, at least six varieties, named, prem., $1
For twelve Geraniums, double, at least six varieties, named, premium, $1
For twelve Geraniums, single, at least six varieties, named, premium, $1
For twelve Phlox, hardy perennial, at least six varieties, named, premium, $1
For twelve Cannas, at least six varieties, named, premium, $1
For twenty-four Carnation Pinks, at least six varieties, named, premium, $1
For twenty-four Verbenas, at least six varieties, named, premium, $1
For twenty-four Roses, at least six varieties, named, premium, $1
For twenty-four Garden Annuals, at least twelve varieties, named, premium, $1
For twelve Calendulas, at least two varieties, named, prem., $1
For twelve Asters, Double Victoria, premium, $1
For twelve Asters, Double, Truffaut's Peony flowered, prem., $1
For twelve Asters, Pompone, premium, $1
For twelve Phlox Drummondii, in variety, premium, $1
For twelve Nasturtiums, at least six varieties, premium, $1
For twenty-four Pansies, in variety, premium, $1
For twenty-four Zinnias, double, in variety, premium, $1
For twenty-four Marigolds, African, in variety, premium, $1
For twenty-four Marigolds, Dwarf French, in variety, prem., $1
For twenty-four Petunias, single, in variety, premium, $1
For display of Coxcombs, in variety, premium, $1
For twelve Scabiosas, in variety, premium, $1
For twelve Delphiniums, in variety, premium, $1
For twelve Dianthus (double, annual), in variety, premium, $1
For twelve Salpiglossis, in variety, premium, $1
For collection of Sweet Peas, premium, $1

VEGETABLES.

Rules for Fruit apply to Vegetables.

Beets—For best twelve specimens, Eclipse, Dewing, and Edmands, premiums, each variety, $2

Carrots—For best twelve, Short Top, Long Orange and Danvers Intermediate, premium, each variety, $2

For best twelve, Short Horn Orange carrots, $2

Mangold Wurtzels—For best six specimens, premium, $2

Flat Turnips—Twelve specimens. For best Purple Top and White Flat, premium, each variety, $2

Ruta Bagas—Twelve specimens. For best Yellow and White, premium, each variety, $2

Parsnips—For the best twelve specimens, premium, $2

Onions—Twelve specimens. For best Danvers, Yellow Flat, and Red, premium, each variety, $2

Potatoes—Twelve specimens. For best Early Rose, Beauty of Hebron, Clark's No. 1, Pearl of Savoy, Early Maine, premium, each variety, $2

Cabbages—For best three specimens, Savoy, Fottler's Drum-Head, Stone Mason Drumhead, Red Cabbage, All Seasons, Deep Head, each variety, premium, $2

For next best, each variety, premium, $1

Cauliflowers—For best three specimens, premium, $2

For next best, premium, $1

Celery—For best four roots, premium, $2

Sweet Corn—For twelve ears ripest and best Early, premium, $2

For best twelve Ears in milk, Late, premium, $2

Squashes—For best three specimens, Marrow, Turban, Warner Turban, Hubbard, Marblehead, Essex Hybrid, Bay State, Sibley, Butman, each variety, premium, $2

Melons—For best three specimens, Nutmeg, Musk, Cassaba, Salmon Flesh, each variety, premium, $2

For best two specimens Watermelons, premium, $2

Tomatoes—For best twelve specimens, Round flat and Round Spherical, each variety, premium, $2

For exhibition of greatest variety of Tomatoes, premium, $2

Cranberries—For pecks of cultivated, premiums, $2, 1

For collection of vegetables, not less than three of a kind, premiums, $4, 3

Placed at the disposal of the committee for whatever appears meritorious, $25

☞No competitor for premium to exhibit more or less number of specimens of any vegetables than the premiums are offered for.

Collections of Vegetables where premiums are offered for a number of varieties must be entered and placed, not less than three of a kind, by themselves on the tables assigned for collections. No collection shall receive but one premium. Specimens of any varieties, in such collections are not to compete with specimens of the same variety placed elsewhere. Exhibitors of such collections however, are not prevented from exhibiting *additional* specimens of any variety with and in competition with like variety. All vegetables must be entered in the name of the grower of them.

Size of Vegetables.—Turnip Beets to be from 2 to 4 inches in diameter; Onions, 2 ½ to 4 inches in largest diameter; Potatoes to be of good size for family use; Squashes to be pure and well ripened, Turban, Marrow, Hubbard, Marblehead, all to be uniform size.

GRAIN AND SEED.

For best peck of Shelled Corn, Wheat, Oats, Barley, Rye, Buckwheat, and Field Beans, each, premium, $1
For 25 ears of Field Corn, premiums, $3, 2
For 25 ears of Pop Corn, premiums, $2, 1
For collections of Field and Garden Seeds, premiums, $6, 4
All grain or seed *must have been grown by the exhibitor in the County* to receive a premium.

Domestic Manufactures.

Contributors must deposit their articles at the Hall before 11 o'clock on the first day of the Exhibition. Articles not thus deposited will not be entitled to a premium. Gratuities will be awarded for articles of special merit for which no premium is offered; but no premium or gratuity will be awarded for any article manufactured out of the County, or previous to the last exhibition of the Society.

COUNTERPANES AND AFGHANS.

For Wrought Counterpanes having regard to the quality and expense of the material, premiums, $3, 2
Gratuities will be awarded for articles belonging to this department, the whole amount of gratuities not to exceed $25

CARPETINGS AND RUGS.

For carpets, having regard to the quality and expense of the material, premiums, $3, 2
For wrought Hearth Rug, having regard both to the quality of the work and expense of the materials, premiums, $2, 1
Gratuities will be awarded for articles belonging to this department, the whole amount not to exceed $20

ARTICLES MANUFACTURED FROM LEATHER.

For best pair hand made and machine made Men's Boots, Women's do., Children's do., each, premium, $2
Best Team, Carriage and Express Harness, each, premium, $3
$8 are placed at the disposal of this committee, to be awarded in gratuities.
For the best exhibition of Boots and Shoes, manufactured in the County, each, premium, Diploma of the Society.

MANUFACTURES AND GENERAL MERCHANDISE.

For display of Bonnets, premiums, $3, 2
For horn Combs, not less than one dozen, premium, $1
At the disposal of the committee in this department, to be awarded in gratuities not exceeding $3 in any one gratuity, $15

FANCY WORK

Of Domestic Manufacture are not included in the above.

At the disposal of the committee in this department, to be awarded in gratuities not exceeding $3 in any one gratuity, $40

WORKS OF ART.

At the disposal of the committee in this department, to be awarded in gratuities not exceeding $2 in any one gratuity, $40

DECORATED CHINA.

At disposal of Committee to be awarded in gratuities, not exceeding $2 in any one gratuity, $20

WORK BY CHILDREN.

For specimens of work performed by children under 12 years of age exhibiting industry and ingenuity, premiums, $2, 1

At disposal of committee to be awarded in gratuities, $10

List of Premiums to be Awarded by the Trustees in November.

FARMS.

Competitors for this premium must give notice of their intention to the Secretary on or before June 15th, and the farms entered for premium will be viewed by the committee twice during the year. Crops growing on farms that are entered for premium, cannot be entered with another committee for separate premiums—except crop specimens exhibited at the fair.

Any person desirous of having *his farm inspected, without entering it for premium*, may make application to the Secretary, and it will be viewed and reported upon by the committee.

For the best conducted and most improved farm, taking into view the entire management and cultivation, including lands, buildings, fences, orchards, crops, stock and all other appendages, with statements in detail, relating thereto, premium, $20

IMPROVING WET MEADOW AND SWAMP LANDS.

For best conducted experiments relating to wet meadow or swamp lands, on not less than one acre, the course of management, and the produce, etc., for a period of two years at least, to be detailed, with a statement of all the incidental expenses, premiums, $10, 6

NOTE.—The Committee is instructed to ascertain how many, if any, reclaimed swamps in this County have been abandoned or have returned to natural grasses. Persons knowing of such, are requested to notify the Secretary or Committee.

IMPROVING PASTURE AND WASTE LANDS.

For best conducted experiments in renovating and improving pasture land, other than by ploughing, so as to add to their value for pasturage, with a statement of the same, premiums, $10, 6

For best conducted experiments in renovating and improving waste lands, so as to add to their agricultural value, with statement of the same, premiums, $10, 6

No premium to be awarded to any person for a repetition of an experiment in meadow, swamp or pasture lands, for which he has already received a premium.

UNDER-DRAINING LAND.

For best conducted experiments in under-draining land, regard being had to the variety of soil, sub-soil, and other local circumstances, premiums, $10, 6

NOTE.—The same instructions under "Improving Wet Meadow and Swamp Lands" apply to this Committee.

GRAIN AND OTHER CROPS.

Claimants on Grain and Root Crops will be required to state the size of the piece of land, when they enter, and conform to the following rules: Entries of Grain Crops, to be made on or before September 10th; Root Crops on or before October 10th; giving ample time for the crops to be examined by the committee before harvesting. Statement to be made in conformity with the following form, must be forwarded to the Committee previous to November 1st.

All calculations and figures given in reports of, and statements of Crops, are to be made on the *basis of an acre*, results in all cases, to be given at the rate per acre.

In pursuance of authority delegated to the Board of Agriculture by Chap. 24, of Acts 1862, Agricultural Societies receiving the bounty of the State are required to make use of the following form, and be governed by its conditions in the mode of ascertaining the amount of crops entered for premium.

ESSEX AGRICULTURAL SOCIETY.—Statement concerning a crop of———, raised by Mr.———, in the town of———, ———, 1895.

What was the crop of 1893. What manure was used and how much. What was the crop of 1894? What manure was used and how much? What is the nature of the soil? When and how many times ploughed, and how deep? What other preparation for the seed? Cost of ploughing and other preparation? Amount of manure, in loads of thirty bushels, and how applied?

Value of manure upon the ground? How used? (What amount of Commercial Fertilizer used? How used? Value of same when applied?) When and how planted? The amount and kind of seed? Cost of seed and planting? How cultivated and how many times? Cost of cultivation, including weeding and thinning? Time and manner of harvesting? Cost of harvesting, including the storing and husking or threshing? Amount of crop, etc. Signed by ———Competitor.

The committee, to whom is intrusted the award of the premiums on field crops, may award them according to their judgment, but for the purpose of furnishing accurate statistics for the benefit of agriculture, shall select certain of the crops, and require the owners thereof to measure the land and weigh the crops accurately, giving to the committee a certificate of the same, and give all possible information thereon over their own signatures, and return the same to the Secretary of the Society, to be published in the annual transactions.

In ascertaining the amount of crop, any vessel may be used and the weight of its contents once, multiplied by the number of times it is filled by the crop.

In measuring the land or weighing crops, any competent person may be employed, whether a sworn surveyor or not, and must give certificate.

The certificate shall state the weight of all crops only in a merchantable state.

In ascertaining the amount of a hay crop entered for premium, the measurement of the hay in the barn may be employed.

RULES OF MEASURE PRACTICED AND ADOPTED BY THE STATE BOARD OF AGRICULTURE.

Wheat, Potatoes, Sugar Beets, Ruta Bagas, Mangold Wurtzels,	60 lbs.	to bush.,
White Beans and Peas,	62 "	"
Corn, Rye,	56 "	"
Oats,	32 "	"
Barley, Buckwheat,	48 "	"
Cracked Corn, Corn and Rye, and other meal, except Oat,	50 "	"
Parsnips, Carrots,	55 "	"
Onions,	57 "	"

1. For the best conducted experiments of Rye, not less than twenty bushels to the acre, fifty-six lbs. to the bushel, on not less than one acre, premiums, $7, 4

2. For best conducted experiments of Wheat, not less than thirty bushels to the acre, sixty lbs. to the bushel, on not less than one acre, premium, $7, 4

3. For best conducted experiments of Oats, not less than fifty bushels to the acre, thirty-two lbs. to the bushel, on not less than one acre, premiums, $7, 4

4. For best conducted experiments of Barley, not less than forty bushels to the acre, forty-eight lbs. to the bushel, on not less than one acre, premiums, $7, 4

5. For best conducted experiments of Indian Corn, on not less than one acre, premiums, $7, 4

6. For largest quantity and best quality of English Hay, on not less than one acre, regard being had to the mode and cost of cultivation, premiums, $7, 4

7. For best yield of Field Beans, on not less than one-half acre, and not less than twenty-five bushels per acre, premiums, $7, 4

ROOT CROPS.

1. For best conducted experiments in raising Carrots, fifty-five pounds to the bushel, premiums, $7, 4

2. For best conducted experiments in raising Parsnips, fifty-five pounds to the bushel, premiums, $7, 4

3. For best conducted experiments in raising Beets, premiums, $10, 5

4. For best conducted experiments in raising Ruta Bagas, sixty pounds to the bushel, premiums, $7, 4

5. For best conducted experiments in raising Mangold Wurtzels, sixty pounds to the bushel, premiums, $7, 4

6. For best conducted experiments in raising Sugar Beets, sixty pounds to the bushel, premiums, $7, 4

7. For best conducted experiments in raising Onions, fifty-two pounds to the bushel, premiums, $7, 4

8. For best conducted experiments in raising Potatoes, sixty pounds to the bushel, premiums, $7, 4

9. For best conducted experiments in raising Cabbages, premiums, $7, 4

10. For best conducted experiments in raising Squashes, premiums, $7, 4

11. For best conducted experiments in raising Summer English Turnips for the market, premiums, $7, 4

Raised on not less than half an acre, and the quantity of crop to be ascertained by weight ; so far as practicable the crop to be free from dirt, without tops, and in a merchantable condition at the time of measurement.

Claimants for premiums on Grain and Root Crops must forward statement to chairman of committee *before Nov. 1st.*

FOREST TREES.

1. For plantation of either of the following species of forest trees, viz.: White Oak, Yellow Oak, Locust, Birch, White Ash, Maple, Walnut, or White Pine, not less than three years old, and not less than 1000 trees, premium, $10

2. For plantation of not less than 600 trees, premium, $8

3. For ornamental trees, ten or more set on any street, road or farm, and cared for five years, premium, $8

CRANBERRIES.

For best conducted experiment in the cultivation of the Cranberry, at least two summers, on not less than twenty rods of land, with written statement of the quantity and quality of the land, expense of planting, weeding and culture, and amount of crops produced. Premium to be paid in 1894 and 1895, $10

For best experiment do., on not less than ten rods of land, premium, $7

STRAWBERRIES AND OTHER SMALL FRUITS.

For best crop of Strawberries, on not less than twenty rods of land, expense of planting, culture, crop, etc., stated in writing, premium, $7

For best crop of Currants, Raspberries and Blackberries, with statement as above, premiums, each, $7

NEW WINTER APPLES.

For a new variety of Winter Apple, originated in this County, equal or superior to the Baldwin, premium, $50

For a new variety of like character originating elsewhere, provided it has been cultivated in the County sufficiently to prove it equal or superior to the Baldwin for general purposes, premium, $20

For a successful experiment in destroying the codling moth and other worms destructive to the apple, premium, $20

NOTE.—Persons who consider themselves competitors will send Post Office address to Secretary, and others in the County wishing to compete for above, must notify Secretary, and furnish a full statement of their apple, and also scions when called for under his directions, to be tested by the Society.

SEEDLING POTATOES AND EXPERIMENTS.

For best Seedling Potato, originating in Essex County, to equal in yield, earliness, and quality, the Early Rose, and to surpass it in one or more of these particulars, premium paid after three years' trial, $20

In testing the value of a Seedling Potato, the committee are instructed to take sworn testimony of the cultivator with regard to the yield, after having inspected the crop.

For the most satisfactory experiments to extend through five consecutive years, to settle the following facts relative to raising potatoes :—premium, $25

1st. Will whole, medium sized Potatoes, yield better results than pieces cut to two eyes ?

2nd. What will be the result of continuously planting small-sized potatoes of the same strain a series of years ?

3rd. Difference between hilling and flat cultivation.

4th. Effect, if any, of cutting off seed ends before planting.

5th. Effects of deep and shallow planting.

6th. Raising from sprouts alone from same strain.

7th. Can potatoes having dwarf vines be planted nearer than others.

8th. Best distance apart for seed in the drill.

9th. To show the effect of covering the top with earth at several times after they had come up.

To be raised on not less than a half acre of land, uniform in character, and all to receive the same kind and quality of manure and cultivation, and to be inspected by the committee at the time of gathering the crops.

ESSAYS AND FARM ACCOUNTS.

The Essays must be transmitted to the Secretary by the 1st of November, with sealed envelopes containing the names of their authors, respectively, which shall not be opened by the committee, nor shall the names be known to the committee, until they shall have decided upon the merit of the Essay.

For original Essays on any subject connected with Agriculture, in a form worthy of publication, premiums, $10, 8

For best statement of Actual Farm Accounts, drawn from the experience of the claimant, in a form worthy of publication, premium, $8

For Reports of Committees upon subjects for which premiums are offered, premiums, $8, 6

Committee—G. L. Streeter, Salem; N. M. Hawkes, Lynn; D. E. Safford, Hamilton; Geo. E. Blodgette, Rowley; J. M. Danforth, Lynnfield.

LIBRARY.

Committee—Andrew Nichols, Danvers; Henry Brooks, Salem; B. P. Ware, Marblehead; J. M. Danforth, Lynnfield.

TREADWELL FARM.

Committee—Benj. P. Ware, Marblehead; C. C. Blunt, Andover; B. P. Pike, Topsfield; G. B. Blodgette, Rowley; George B. Bradley, Methuen; John M. Danforth, Lynnfield.

AUDITORS.

Committee—J. Hardy Phippen, Salem; Benj. P. Ware, Marblehead; E. Pope Barrett, Peabody.

FARMERS' INSTITUTES.

Francis H. Appleton, Asa T. Newhall, C. C. Blunt, O. S. Butler, John M. Danforth, Lynnfield.

DELEGATES.

From the Essex Agricultural Society to attend Exhibitions of Societies, Farmers' Clubs and Fruit Growers' Associations in Essex County, and report any information that shall seem valuable for publication.

The Secretary to be notified of the time of holding their exhibition, who will notify the chairman of Committee to assign Delegate.

COMMITTEES.

All Committees, including committees to judge of Crops, of exhibits at Fair, and of the Arrangements for the Fair, are chosen by the Trustees at their June meeting.

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TRANSACTIONS

FOR THE YEAR 1895

OF THE

ESSEX AGRICULTURAL SOCIETY

(ORGANIZED 1818,)

FOR THE

COUNTY OF ESSEX,

IN MASSACHUSETTS,

AND ITS

SEVENTY-SECOND ANNUAL ADDRESS

BY

REV. OSCAR F. SAFFORD D. D.,

OF PEABODY.

With the Premium List for 1896.

PUBLISHED BY ORDER OF THE SOCIETY.

SALEM, MASS.:

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1895.

FARMING IN ESSEX COUNTY.

ANNUAL ADDRESS BY REV. OSCAR F. SAFFORD, D. D., OF PEABODY.

It is convenient for a speaker sometimes not to be under obligation to speak according to the limitations of his own experience. Our lamented friend, Dr. Miner, found it so when, after he had one Sunday preached a pointed sermon on the rearing of children, a brother minister the next day said to him: "A pretty man you are, who have no children of your own, to preach to parents on the bringing up of children." "I do not," replied Dr. Miner, "spoil good theories by bad practice." I claim to possess a like advantage when I speak on agriculture. My ideals have not been spoiled by experience. Of this, doubtless, you who have invited me to speak to you today are already aware. I assume that it is your expectation that I shall speak on our theme, not as a practical agriculturist, but as an observer and well-wisher of men. Clergymen may at times profitably listen to laymen; so one who has never done actual farm work save with his eyes, may be faithful to himself in speaking friendly and appreciative words, and even words of modest exhortation, to those who are privileged to live on the soil and keep near to nature's heart.

I am, as you are aware, wont professionally to speak from a text; and following my habit I will take for my text the name of the organization of which you are members, and I am today a guest to be endured. I will ask you to consider with me the three related things which the name *Essex County Agricultural Society* suggests—firstly, the claims of the County of Essex upon our loyal regard;

secondly, the advantages attending agriculture in this County; thirdly, the benefits to be derived from such an agricultural society, as is here represented.

I select these aspects of our subject for discussion with you, farmers of Essex County, because I cannot hope to do better for you than to help you, if it is ever so little, to grateful content and reasonable ambition in the precise places which the falling of the providential lines have alloted to you.

A claim made for Essex County by an excellent historian,—a claim made conspicuous by being placed on the first page of his book,—is this: "The most historical county in America." As I am not a native of the County, it will not of course be expected of me that I shall endorse at quite its maximum this valiant claim. I recall that during the winter of '71-'72, after the great Chicago fire, —the blaze which was started from the lantern which Mrs. O'Leary's cow kicked over while she was milking it on Sunday evening,—that same Mrs. O'Leary's cow was exhibited in the principal cities of the Union at ten cents a sight. That historic cow was on exhibition at the same time in St. Louis, Cincinnati, Buffalo and Omaha, and other places: it was not, in fact, much of a city, that did not, January 1, 1872, have that cow on exhibition. By a method more honest, yet quite as partial, one can, I suppose, find "the most historic county of America," in any State of the Union. I should not like to say to a New Yorker, or a Bostonian, or a Philadelphian, that he does not live in the most historic county of America; and I am altogether too timorous to suggest to a representative westerner, that *he* is living in a second-rate historic county. To the native-born citizens all counties, are, no doubt, the most historic. The sky appears highest directly over our heads, and it appears as it recedes, to shut down on the earth; but when we travel to the uttermost parts we still find the sky to be highest directly over our heads. I con-

cede the disputed right of every native born citizen of Essex County to maintain against the world that this is the most historic county in America; meanwhile I will personally endorse the claim to the extent of declaring that old Essex County is historic.

The traditions of this county reach far back into the period when the Indian tribes, the Pennacooks, the Pentuckets, the Narragansetts and Naumkeags, were the almost undisputed possessors of its lakes, streams and forests. Our acquaintance with the Indians of this region is legendary, and is still receding into the realm of myth and fable. Indian legends have become the shadowy background of all our American history. We have traditions also of such European pioneers as John Endicott, John Winthrop, Sir Harry Vane and Roger Williams; these make Essex County the associate of Suffolk and Plymouth counties in stirring annals of explorers and founders. We have also our witchcraft history. More than two hundred years ago, the previously undisputed belief in demoniac possessions here came into collision with Yankee common sense; and the belief in the reality of demoniac possessions was then dissipated for the world and forever. The nineteen martyrs who were hung on Gallows Hill for refusing to falsely confess themselves witches or wizards, were as real martyrs as any men in the ages who have preferred death to the loss of personal integrity. Essex County has also its own store of revolutionary memories. On its soil at North Bridge, Salem, the New Englanders first said from behind a wall of bayonets to Old Englanders, "Thus far, but no farther." And from farms of Essex County volunteers sprang to the front at the first promise of American independence. Scarcely more than a stone's throw from this place stands a monument commemorating the names of Essex County men who marched to Lexington on the 19th of April, 1775, —the names of some who did not live to return from that first skirmish of the Revolution.

And in the later struggle, when the nation war-welded its unity and emancipated a race from bondage, Essex County gave its full share of patriotic devotion and patriots' blood, for America's redemption and Liberty's cause. Truly this county is historic. We are rich in our common American traditions of trying times and prophetic spirits, with some traditions peculiarly our own; and we can scarcely have a better hope for the county's future than that it shall be faithful to its past.

The natives of Essex County have also reason to hold in affectionate regard the landscape on which their eyes first saw the light. The topography of the county averages well. It has neither mountains nor deserts. Across the entire country runs the industrious and beautiful river Merrimac, its industry serving within our domain to turn the spindles of Lawrence and the shoe-machines of Haverhill; its picturesque beauty being such as moved Whittier to grateful song The landscape of the County, with its numerous irrigating streams, its graceful hills, its fertile valleys and plains, its unsurpassed fringe of ocean with its cape running out into the sea, its ocean worn rocks, its musical beaches, its safe harbors and romantic ocean coves, around some of which the rocks are wild and broken and around others the summer grass comes down as a carpet to the ocean's edge,—the scenery, in a word is such as no appreciative native, wherever he wanders, can ever forget, or to his latest day can wish to forget.

And the county's attractions in its *personnel*, its men and women, can to the native-born citizen scarcely be second to either its historical or natural attractions. The native born citizens of this county, I am wont to think, do no discredit either to its history or its soil. Great names have added their lustre to the county. Here Nathaniel Hawthorne was born, the man having the most distinctive imagination of any man in his century. Here John Greenleaf Whittier was born, the lovable man who has

done for Essex County and New England an idealizing work like that which Robert Burns did for Scotland,—the poet renowned also in America and among all English speaking people as the divine bard of freedom. Here Nathaniel Bowditch was born, the self-taught man who became such a navigator that in 1803 he piloted a ship into Salem Harbor in a winter night-storm by dead reckoning, who became such an expert in knowledge of the earth and sea and sky, as makes his name worthy of mention with that of Benjamin Franklin. Here George Peabody was born, a pioneer in consecrating great powers of accumulation to the service of humanity, and giving during his life-time on such a scale as the world had never before witnessed. Many are the other natives of this county who have added renown to her name. And I am persuaded that our common citizenship brings no discredit to the county. Here the homely virtues thrive. Here are patriots who carry latent in their blood a devotion to home and country equal to that of the best citizens of the nation. Our native population is substantial and sturdy, not given to quick excitements; it is thrifty and generous and fraternal; so that Essex County may be rightly loved by its children more for its present human quality than for its historical or natural attractions. Essex County is a good county to be born in and to live in.

Such is Essex County; but what concerning its agriculture?

It is a trait of human nature, at least of some Yankee human nature, to suspect that some other place is better than the present place. When I have in my summer outings hunted New England over for the best fly trout-fishing, I have found the common report, excepting always that of the landlords and boatmen, to be that the fishing is good about twenty miles further on. It is the habit of some Yankees to think that farming is easier and more profitable in some other place. This trait of the Anglo-

Saxon race is not, however, to be without discrimination condemned; for it brought our forefathers to these shores; it has sent civilizers to the West; it has extended our nation from ocean to ocean. But a good trait may be exaggerated. The longing which possesses some of our population for the prairies of the mid-continent or the imagined paradise of southern California, or the orange-growing soil of Florida, needs to be modified by a knowledge of exact facts. Credulity toward the rose-tinted stories of the land-speculators needs no increase in our midst.

While not attempting to belittle the actual advantages of the South, or the West, or the Pacific slope, it is not a sign of sound sense to believe that New England, including our own section of it, has ceased to be a recipient of Divine favor or an attractive part of our nation. Nature, I believe, is as friendly to its friends in Essex County as in any part of the globe.

I am not unaware or unmindful of the obstacles against which an Essex County farmer must contend. I recall the potato-bugs and canker worms, the constant need of fertilizing the soil, the uncertainty of the crops, and the greater uncertainty of the market, and the probability of low prices for farm produce, and the long, cold winters. Yet under such disadvantages I believe farming to be on the whole as prosperous here as in any other region. I have seen the most thriving prairie farmers in their own homes. I have seen the cornfields and grain fields which are measured not by the acre but by the mile. I have seen in southern Illinois a soil of rich vegetable mold four feet and even six feet deep. But I have not seen one western farmer who years ago emigrated from the East, who has appeared to me to have won from nature a greater success, all things considered, than he might have achieved, by equal venture, enterprise and self-denial in an average New England neighborhood.

Distance lends not only enchantment but often a deceiv-

ing glamour to the view. I have known, I should say, dozens of men, some of them clergymen, who have invested hard-earned thousands of dollars in orange-groves in Florida. I do not know one who, at this date, has received any fair return for his invested money; or any one who, as I think, would not do well to sell out his investment at fifty or even twenty-five cents on a dollar. I know, on the other hand, a farmer in Maine who gave himself intelligently and industriously to the cultivation of an apple-orchard, giving to it the same sort of discriminating care that must be given to orange-groves in Florida or peach orchards in Maryland; and the last I knew of the man, and it was only two years ago that I saw him on his farm, his apple-orchard, which was not of very great size, had for several years netted him an annual return of five hundred dollars clean money.

I remember the time when the claim was made that Kansas was the farmers' paradise. And I cannot as an American be sorry that enough New Englanders went to Kansas to bring that territory into the Union as a free state. But in the last census I read that there are twenty-one towns in Kansas which have now not a single inhabitant. Farming in those towns has failed utterly. We have some deserted hill-farms in New England, but not many I suppose in Essex County,—and these New England hill-farms, as I find in many instances, are deserted because they ought never to have been chosen instead of the fertile valleys below them; and these deserted hill-farms in New England are furthermore now being in many cases recovered by amateur farmers from the city who like picturesque views so well that they are willing to spend some money in farming and buy their vegetables of their neighbors. But when an entire town is deserted, as has been the case repeatedly in the new western country, we can scarcely measure the disappointment and suffering which the grim fact implies. A brave struggle was in

many a case begun with wild nature, but foes worse than the Indians were encountered—malaria, with fever and ague; wood or coal dearer than corn for fuel; abundant harvests but markets so distant that speculators got all or the major share of the profits; longing for a sight of the old hills, and irrepressible homesickness and chronic heart-ache,—these, and such as these, are the enemies that have won the battle against many a farmer beginning in a new country. Some men have fled from New England canker-worms and potato-bugs, and have found themselves in the West so beset with grasshoppers that they would be glad, if they could get back to their old home, to apologize to the easily-mastered canker-worms and potato-bugs for reckoning them enemies.

Farming as a means of livelihood can hardly be mere pleasure seeking, East or West, North or South; but as a life-work I believe that it can be fulfilled under as favorable circumstances by the farmers of Essex County who remain in their old homes, as by those who become the pioneers in distant lands.

A striking testimony was given to the real prosperity of the farmers of Essex County seven years ago, by the poet Whittier, in a letter which he wrote to this society. "I have lived," he said, "to see a great and favorable change in the farming population of Essex County. The curse of intemperance is now almost unknown among them; the rumseller has no mortgage on their lands. As a rule they are intelligent, well-informed and heartily interested in public affairs, self-respectful and respected, independent landholders, fully entitled, if any class is, to the name of gentlemen."

Upper and under classes are found in every profession and calling; and nowhere are upper and under classes more notable than among farmers. When a farmer mortgages his farm in favor of laziness or drink, and loses his credit, and stuffs old hats into broken window panes, you may be

sure he lives about as measerly a life as can be lived out of politics. But when a man has his farm paid for, and a little reserve in the savings bank, and appreciates his wife's flower garden, and loves his country and his church, you need not doubt that he is about as near being a king as we can suffer any one to be in our Republic outside of our Peabody "Kingdom."

"No better proof of real gain," says Whittier in the same letter from which I have quoted, "can be found than the creation of pleasant homes for the comfort of age and the happiness of youth. When the great English critic, Matthew Arnold, was in the country, on returning from a visit in Essex County, he remarked that, while the land looked to him rough and unproductive, the landlords' houses seemed neat and often elegant, with an air of prosperity about them. 'But where,' he asked, 'do the tenants, the working people live?' He seemed surprised when I told him that the tenants were the landlords, and the workers the owners." After such a discerning recognition of the comparatively high and genuine prosperity of the farming interest of Essex County, every farmer in our community has the right to feel a new dignity and courage in his calling.

It is not for me, if it is for any one, to conjecture what agricultural possibilities are latent in this county. We are told, by accredited scientists, that our mineral soil is the most easily renewed of any on the continent. When the rich vegetable soil of large sections of the West is once exhausted, its fertility cannot be renewed for generations. It is not impossible that the essential agriculture of the nation may yet devolve on the Atlantic slope, and Essex county may find itself able to provide the general sustenance which now so abundantly comes from the West. The six staple crops of this county, as this society has virtually determined, are onions, cabbages, corn, potatoes, squashes and turnips. There must be in due time, other available

crops. It seems to me that if our farmers paid the attention and devoted the skill to apple-raising, that the demand, both at home and abroad, now warrants, apples would be a staple scarcely second to any other.

New resources are always being developed by a thrifty people. When my native state of Maine had pretty much stripped its forests of pine and spruce trees, the question arose what could be found to reward the labor of the lumbermen. It was presently found, because of the discovery of the method of turning wood to pulp and thence to paper, that the bass-wood trees, which were previously reckoned worthless, were the most marketable of all the forest trees. I have found the woodsmen of Maine, on my recent summer visit, to be largely given to the raising and lumbering of white birch, to be used for spools, tooth-picks and the like, and these rapid-growing trees give them new cuttings, on the same ground, every eleven years. The former entire lumber yield of Maine, I am told, is now more than equalled pecuniarily by the ice yield of the Kennebec and Penobscot. Time was, when New Hampshire, with its barren hills, was reckoned hard soil on which to raise anything but men; now it finds its most lucrative harvest to be from summer boarders.

I am confident that the yet undeveloped resources of Essex County,—to be found perhaps in the appliance of the sewerage of our cities to fertilization, in the application of wind-generated electricity to the soil, in extending natural irrigation as insurance against rain failure and summer drought, will advance agriculture as much beyond its present standard as it is now advanced beyond what it was when the land was devoted to maize growing by the Indian sagamores.

There will come a day when farmers will really believe that to concentrate labor and fertilization on five acres will be more profitable than to spread labor and fertilization thin on fifteen acres. Every military student knows that

in war the time taken for preparation by one army is time given for preparation to the other; but scarcely any one in history till Bonaparte's day, had courage to put the fact to a practical test. It is yet the exceptional farmer who has courage enough to fertilize rather than skim the land. There is really little need of sending the boys West when they want farms of their own; the home farm can be divided, and plenty of land be found for concentrated culture by the father and all his sons.

Farming, for all that I can see, will continue to be the pursuit in which men must not be afraid of hard work. If farming could be made as easy and secure and profitable as some farmers would have it, the business would be soon ruined. Then every lame merchant and briefless lawyer and unwelcome minister would go to farming. Farming needs to be kept so hard as to repay work and skill, and also pretty much bar out the amateurs. Agriculture in the nature of things cannot, if overdone, be profitable. The farmer's calling, as society is now organized, is the most essential to mankind of all the callings. And no calling can be more honorable. And in no part of the world, I am persuaded, can agriculture be pursued, all things considered, under more favorable circumstances than in Essex County.

And now, with whatever patience and hearing faculty you have left, we will take up for brief closing suggestions the final word Society.

To the justification of my optimistic prophecy concerning agriculture in this county two things among others might be made to contribute.

Farmers through more complete and business-like organization might bring themselves into more direct and intelligent relations to the market. Why is it not feasible for farmers of a given district to combine and employ an agent in the centre of the markets, to advise them what crops to raise for the actual or prospective market demand,

when to bring their produce to the market, when to hold their produce in reserve? I heard the other day of a farmer carrying a load of tomatoes to Boston and being compelled to sell in the glutted market for thirty-five and forty cents a bushel. Another farmer carried in a load of green corn, and sold for two cents per dozen ears. This sort of thing, no doubt, is common enough. And the consumer, as a rule, pays the same price as usual for the farm produce. I have known some marketmen to get rich, while the farmers who have enriched them, have, by equal skill and industry, no more than held their own. It has seemed to me that farmers might, by having a competent adviser at the market, one who can keep a practiced eye on all the markets, save themselves from much needless waste. Farmers, I assume, are in some degree served by the public weather bureau; to-morrow's weather probabilities may properly, to a certain extent, govern their labor-plans. Why not also by the probabilities forecast by a friendly market expert? Farmers do not now seem to very thoroughly understand even the demands of the home market. While I am told of Bartlett pears selling in Boston for seventy-five cents a barrel, I try in vain to buy good autumn eating apples at any price in our home market. Farmers ought to be helpers rather than rivals of each other. My suggestion may not be worth the breath it consumes to utter it; but it has seemed to me that the tillers of the soil might, not by forming a trust, but by friendly combination and unitary action, come into more just relations to the market.

Through precisely such a society as this, farmers may promote their social and home life. This society is fortunately organized on a broad basis. No one is excluded for his politics, or his religion, or his race; and one is allowed formal membership in the society even if he is a farmer only by being a consumer of farm produce. The benefit which this old and honored agricultural society has con-

ferred on the social life of this county can scarcely be measured. Long may it continue its proffered opportunities for Essex County farmers to know each other by shrewd comparisons, friendly emulations and fraternal handshakes. May sweet reasonableness and nature's own moderation and peace prevail in this organization.

Welcome, Essex County Agricultural Society, to your permanent home in Peabody. I speak for the whole citizenship of this town when I express gladness that you have chosen to make with us your abiding place. In this town, that borders on Salem, the oldest city of the county, and on Lynn, the largest city, and is within hailing distance of Beverly, the youngest city in our county up to date, you are in the centre of a large population,—and a population that is likely to become more and more interested in the objects promoted by your society. Here you have found accessible and attractive grounds, and a hall for the display of the fascinating products of the garden and the home, not surpassed by any hall in the county for comeliness and convenience. With hearty good-will and a desire to render you whatever help we may, we bid you welcome; and we hope, through many a year to come to give under propitious autumnal skies, a cordial annual greeting to the Essex County Agricultural Society.

LOCATING OUR SOCIETY.

The locating of the Essex Agricultural Society, which was incorporated in 1818, and which has held Annual "Cattle Shows" ever since in different parts of the county, has been accomplished only after as much careful thought as could be given to it by the busy men who have composed the committee, to whom the Society, by a decisive vote, assigned the duty.

The call for the Society's meeting, which took the decisive action, was thoroughly advertised in the papers, and by action of the Trustees.

Sites for a location were asked for and suggested, and offered, in different parts of the county. All such were visited and inspected, and earnest desires were shown for the Society, with its accessories, to join the several localities in promoting the Society's work. The parts of the county thus visited were varied; and other parts expressed their willingness to offer a location and welcome, but declined to do so, from a belief that such location would not be for the interest of the county as a whole.

The annual receipts had been falling off largely for a number of years, to the great injury of that influence which had come to the Society by having an income yielding fund. People, who visited the free exhibit of live stock, were too apt to neglect to visit the "Hall Exhibit" where a small entrance fee was charged, although the Hall Exhibit was of excellent quality. Our "Cattle Shows," consequently, became an expense too great not to unduly balance our combined receipts at the Fair, from our fund, and from the amount annually allowed by the state.

Consequently the Society's life was in danger, and a new departure became a necessity.

While the committee hel l constantly before them the benefit to our agriculture and the promoting of all that pertains to the welfare of our agriculturists, they saw clearly that this could but be done when the receipts were unsatisfactory.

They also had in mind that the Society's fund had largely decreased during the past six or more years, and should be regained.

A location was sought that would be reasonably convenient for people from all parts of the county, and so located that freight could arrive with good convenience to all interested. Again, to secure fair receipts, the location should be in the centre of a considerable population, which would visit the shows in such goodly numbers in pleasant years, as to offset losses in years when bad weather came with the Show.

Such a location the committee believe they have found in Peabody, a sightly field with historic connections, and facing on a broad avenue, which crosses that portion of the Town's park land that lies near the Town Hall. The field was about ten acres in extent, during the Fair of 1895, but was inconveniently small. Your committee believe that the acreage should be increased by several more acres that can be bought now by the Society, and will give the matter immediate attention.

The town of Peabody has freely and unanimously voted the use of the Halls in the Town Hall to the Society so long as it desires to use it, and the accommodations there are excellent. The use of the Institute Hall has been voted by the Trustees for the annual meeting and address; and a like courtesy was kindly extended of the Church vestry, for the Society's meeting to fill committee vacancies and for the dinner, by the Central Church Society.

What the future fairs will be must not be gauged by the fair of 1895, because the time between the decision to locate in Peabody and the completion of track, live-stock

buildings and pens, headquarters and fencing was too short to have the exhibits do justice to the Society and the location. Nor was the advertising of the fair in any manner complete, which lessened the receipts from what will be possible in the future.

Some criticism, as to the location, has been made, but from every part of the county, words of commendation and encouragement have reached the ears of the management, which proves to them that interest can still be expected in the old Essex Society, which means that representative exhibits can be expected in the future as in the past of an high quality.

We must have active workers among our members in every city and town, who will promote the interests of this Society and see that our exhibits are representative of old Essex County, and are not local in character. There are enough men who are ready to thus exhibit, and who only need to be reminded that they will be welcomed at Hall or Show Grounds, if they will bring of their produce or live-stock.

It may be well to appoint a committee of one, or more, in each city and town, as advised so earnestly at our last annual meeting, to see that their respective localities are represented at our show.

Our transactions, it would seem, need revising. They are larger than the requirements of the times warrant, and the amounts of our prizes, and their liberality far surpass any other Society in the state. This subject can well be left to a Judicious Committee, who are willing and ready to take the responsibility of considering fully this matter and of acting before the next issue of the transactions, and prize lists for 1896.

The possibilities of an exceedingly good show next year with attractions of an interesting and harmless character, can be introduced to advantage. A careful committee should have charge of this matter with power to act.

Let all join in making the fair of the year 1896, the year of a presidential election, a grand success. Let it be a fair of our agriculture, for our agriculturists and by our agriculturists : and ask everyone in and beyond the county to join us.

SEVENTY-FIFTH
Annual Cattle Show and Fair

The Cattle Show and Fair of this Society opened Tuesday, Sept. 17, 1895, at Peabody, on the Society's grounds. The entries in all the departments were below the average, noticeably so in the cattle, but the reputation of the farmers of Essex County was sustained as everything on exhibition was up to the standard, and it is hoped that next year the farmers will bring more of their stock to the Fair, and we have reason to believe they will, as they have seen the buildings erected, and know they can be safely and securely cared for.

The exhibit of apples was remarkably fine considering the scarcity of the crop the present year.

In the ploughing match, Thursday, there were nine entries, and some excellent work was done.

At 11 o'clock, Thursday, the annual address was delivered in the Peabody Institute by Rev. O. S. Safford and was appreciated by a fair audience. After the conclusion of the exercises in the Institute the annual dinner was served in the vestry of the South Church, after which President Appleton called the assemblage to order and after a few preliminary remarks introduced Chas. H. Goulding, Esq., chairman of the Selectmen, who welcomed the society to Peabody as their future home, on behalf of the citizens of the town, and was followed by Hon. William H. Moody, Hon. William A. Knox and Alden P. White, Esq., all of whom made very interesting remarks and received a grand ovation from the people present.

The entries in the several departments of the Fair for 1895 and 1894 are tabulated for comparison, as follows:

STOCK, IMPLEMENTS, ETC., ON SHOW GROUNDS.

	Entries in 1895.	From Different Places in 1895.	Entries in 1894.	From Different Places in 1894.
Bulls,	4	2	13	5
Milch Cows,	17	2	11	3
Herds of Milch Cows,	2	2	2	2
Heifers, Pure Bred,	7	2	11	2
Heifers, Native or Grade,	9	1	16	6
Working Oxen and Steers,	1	1	3	2
Steers,	0	0	3	1
Stallions, Farm and Draft,	1	1	1	1
Stallions, for Driving Purposes,	5	4	7	7
Brood Mares, Farm and Draft,	0	0	1	1
Brood Mares, Driving Purposes,	1	1	1	1
Family Horses,	6	6	9	6
Gent's Driving Horses,	12	9	5	4
Farm Horses,	8	3	9	6
Pairs of Farm Horses, over 2500 lbs.,	1	1	11	8
Pairs of Farm Horses, less than 2500 lbs.,	2	2	8	3
Colts, Farm and Draft,	2	2	8	6
Colts, Driving Purposes,	15	9	26	10
Teams used on Farm,	1	1	6	4
Swine, Large Breeds,	15	1	28	7
Swine, Small Breeds,	8	1	3	1
Sheep,	4	2	10	4
Poultry,	66	7	165	13
Harrows for Trial,	3	2	2	2
Agricultural Implements,	8	5	20	8
Carriages,	7	2	3	2
Ploughing,	10	3	15	6
Total on Show Grounds,	215	22	401	20

EXHIBITS IN HALL.

	Entries in 1895.	From Different Places in 1895.	Entries in 1894.	From Different Places in 1894.
Dairy,	0	0	30	8
Bread and Canned Fruit,	28	5	48	13
Honey,	0	0	3	3
Pears,	176	11	174	19
Apples,	118	13	354	19
Peaches, Grapes and Assorted Fruits,	97	10	112	18
Plants,	12	3	9	5
Flowers,	87	7	84	12
Vegetables,	188	10	326	17
Grain and Seed,	6	2	41	11
Carpetings and Rugs,	19	7	35	7
Counterpanes and Afghans,	44	7	71	12
Articles Manuf'd from Leather,	8	1	14	4
Manu'f'r's and General Mdse.,	21	5	5	3
Fancy Work,	138	11	213	16
Works of Art,	53	10	131	14
Work by Children under 12 years of age,	16	2	23	8
Grange Exhibit,	0	0	1	1
Total in Hall,	1013	26	1674	27

Grand total, 1228 entries from 32 out of 35 cities and towns in Essex County, against 2075 entries from 29 cities and towns last year. Gloucester, Nahant and Salisbury did not have exhibits this year. The entries were: Amesbury, 3; Andover, 7; Beverly, 21; Boxford, 41; Bradford, 9; Danvers, 96; Essex, 2; Georgetown, 3; Groveland, 4; Hamilton, 4; Ipswich, 5; Lawrence, 24; Lynn, 129; Lynnfield, 5; Manchester, 1; Marblehead, 25; Merrimac, 2; Methuen, 2; Middleton, 3; Newbury, 55; Newburyport, 14; No. Andover, 47; Peabody, 624; Rockport,

1; Rowley, 10; Salem, 55; Saugus, 2; Swampscott, 14; Topsfield, 3; Wenham, 3; West Newbury, 9.

REPORT OF THE ANNUAL MEETING.

The annual meeting of the Society was held in the Peabody Institute at Peabody, Sept. 18, 1895, when the following business was transacted:

President Appleton called the meeting to order at 10.30 A. M. and read the call.

On motion of Mr. Butler it was voted to proceed to ballot for President, four Vice Presidents and Secretary all on one ballot.

Result of the ballot. For President, Francis H. Appleton of Peabody; for Vice Presidents, J. J. H. Gregory, of Marblehead, O. S. Butler, of Georgetown, H. G. Herrick, of Lawrence, Asa T. Newhall, of Lynn; for Secretary, John M. Danforth, of Lynnfield. All of the above were elected unanimously.

Voted, That the Secretary and N. M. Quint of Peabody have full charge and control of the Society's grounds and buildings with power to rent them if they think it for best interests of the Society.

Mr. Butler of Georgetown read resolutions of respect for deceased members during the past year which were adopted.

Voted, That the thanks of the Society be extended to the town of Peabody for the aid given the Society; to the Trustees of the Peabody Institute for the use of the building; to the Committee of the South church for their vestry for the annual dinner; and to the Rev. O. S. Safford for his very able address.

Voted, to adjourn.

Report of Committees.

1895.

The following premiums were awarded for live stock.

BULLS.

$6. First premium, to James C. Poor, No. Andover, for 2 year old Holstein Bull "Prince Marion Fairfax."

$4. Second premium, to James C. Poor, No. Andover, for 2-year old Holstein Bull "Aetis."

$6. First premium to Robert Foss, Hamilton, for 4-year old Jersey Bull "Sir Richard Hamilton."

$4. Second premium, to Robert Foss, Hamilton, for 2-year old Jersey Bull.

E. A. Emerson, Chas. J. Peabody, Phineas A. Dodge—*Committee.*

REPORT OF COMMITTEE ON BULLS.

Only four entries of bulls were made, and these by two men, Mr. James C. Poor of North Andover, who makes a specialty of Holsteins, and Mr. Robert Foss of Hamilton, who exhibited Jerseys.

In judging the bulls, the scales of points as recommended by the State Board of Agriculture for Holsteins and Jerseys were used. The two Holsteins scored 84 and 77 in a possible 100, and the Jerseys 97 and 94. It would

seem that this method of judging would in time be more satisfactory than the old method, and lead to more uniform and definite results in a series of years.

Your committee would deplore the absence of bulls and cows from our fair grounds.

Just think of it, farmers of old Essex, only two exhibitors of bulls and two or three of cows! Our county is a large milk producing section, and certainly there are many valuable thorough-bred bulls of the breeds exhibited, as well as many of the other breeds, and doubtless, too, many as fine cows as can be found in New England. Cannot some means or influence be used whereby our show of cattle may be largely augmented in future years? Now that we have fine and commodious buildings it would seem that we might awaken a deeper interest in our cattle show throughout the county, and in future have animals enough to fill our sheds to overflowing. And perhaps too, we might get a respectable showing of the ox team, even if we do live in this fast age of horses, steam and electricity.

At a fair recently held in Tilton, N. H., there were nearly a hundred pairs of handsome oxen and steers, and very many cows and bulls, all of which made a splendid show. Shall Essex County, Mass., be behind the middle of New Hampshire? If we cannot keep up with New Hampshire on oxen at our shows, we certainly can on our cows, if a proper interest is aroused by efforts in the right direction.

E. A. Emerson, Chairman.

MILCH COWS.

$8. First premium to James C. Poor, No. Andover, for Holstein cow, "Madam Eugeine."

$7. First premium to James C. Poor, No. Andover, for Grade cow, "Bessie B."

$7. First premium to James C. Poor, No. Andover, for Holstein cow, "Myra W."

$7. First premium to James C. Poor, No. Andover, for Grade Holstein, "Onedia."

$4. Second premium to James C. Poor, No. Andover, for Holstein cow, "Maid of Penn."

$4. Second premium to James C. Poor, No. Andover, for Holstein cow, "Spott."

John Swinerton, E. A. Emerson, Geo. L. Burnham—*Committee.*

To Committee on Milch Cows:

I enter for milch cows, either foreign, native or grade, the Holstein cow, "Madam Eugeine," 10 years old, calved Mar. 30. From Apr. 10 to May 10th, 30 days, she gave 1950 lbs. milk; an average of 65 lbs. per day; the largest yield in one day, 70 lbs.; is now giving 40 lbs. per day.

And "Bessie B." a grade Holstein and Jersey 5 years old, calved Mar. 24. For the month of April she gave 1860 lbs. milk, an average of 62 lbs. per day, largest yield in one day, 66 lbs. Feed 6 qts. meal (gluten) and 6 qts. shorts with one feed roots and mostly good hay, milked 3 times a day, watered twice a day.

For Holstein cows: "Myra W.," 10 years old, calved July 28, for the month of August she has given 1395 lbs. milk, an average of 45 lbs. per day.

And the cow, "Maid of Penn," 8 years old, calved Mar. 26; in the month of April she gave 1500 lbs. milk.

For native or grade cows, the grade Holstein cow "Spott," 9 years old, calved Aug. 17, has given from 40 to 45 lbs. milk a day for past month.

And the grade Holstein cow "Overna," 4 years old; she calved Jan. 28 (her 3d calf), and has never been dry. She averaged 40 lbs. milk a day in March.

The winter feed has been 4 qts. gluten and cob meal, 4 qts. shorts, one feed, ½ bush. roots, two feeds of dry fod-

der, consisting of oat and corn fodder and good hay, in summer pasture with about ⅔ the winter grain feed, and since Aug. 15, sweet corn fodder twice a day.

Respectfully submitted,

J. C. Poor.

HERDS OF MILCH COWS.

$10. First premium to James C. Poor, No. Andover, for six Holstein and grade cows.

S. F. Newman, J. Scott Todd, William Thornton—*Committee.*

To the Committee on Herds of Milch Cows:

I enter for your consideration the Holstein cows "Madam Eugeine," "Myra W.," "Betz 2d," "Maid of Penn," and grade Holstein cows, "Bessie B." and "Spott."

Madam Eugeine,	record	for	one	year,	15,200 lbs.
Myra W.,	"	"	"	"	13,180 "
Betz 2,	"	"	"	"	12,945 "
"Maid of Penn."	"	"	"	"	11,225 "
"Bessie B."	"	"	"	"	11,000 "
Spott,	"	"	"	"	9,500 "

Winter feed; 12 qts. gluten corn and cobb meal and shorts, one feed of roots, ¼ bush. dry fodder consisting of corn and oat fodder, English hay and 2d crop. Feed twice a day and watered in barn twice a day, carded and brushed once a day, when fresh and giving a large flow are milked three times a day.

In summer they are turned to pasture and the grain feed reduced from ⅔ to ½ the above, and feed after Aug. 1st with corn or barley fodder twice a day.

Respectfully submitted,

J. C. Poor.

HEIFERS—PURE BREED.

$5. First premium to Robert Foss, Hamilton, for Jersey, 3 yrs. old.

$4. First premium to Robert Foss, Hamilton, for Jersey, 1 year old.

$5. First premium to James C. Poor, No. Andover, for Holstein, 2 years old.

$4. First premium to James C. Poor, No. Andover, for Holstein, 1 year old.

$4. First premium to James C. Poor, No. Andover, for Holstein, 2 years old.

$3. Second premium to James C. Poor, No. Andover, for Holstein, 2 years old.

$2. Second premium to James C. Poor, No. Andover, for 6 weeks old heifer.

B. P. Pike, Geo. R. Dodge, Samuel T. Poor, Edward Kent—*Committee.*

GRADE HEIFERS.

$5. First premium to James C. Poor, No. Andover, for Grade Holstein, 3 years old.

$4. First premium to James C. Poor, No. Andover, for Grade Holstein, 2 years old.

$4. First premium to James C. Poor, No. Andover, for Grade Holstein, 1 year old.

William B. Carleton, Andrew Lane, Jr., John Swinerton—*Committee.*

WORKING OXEN.

$8. First premium to Frank E. Kimball, Danvers, for Oxen.

C. J. Peabody, C. P. Mighill, Charles Haseltine—*Committee.*

FARM TEAMS.

$5. First premium to James C. Poor, No. Andover, for 4 Horse Team.

J. F. Kinsman, Albert Emerson, J. H. McKenney—*Committee.*

STALLIONS FOR FARM AND DRAFT PURPOSES.

$8. First premium to J. W. Carlisle, Ipswich, for Percheron Stallion.

W. E. Merrill, Amos P. Alley, J. H. McKenney—*Committee.*

STALLIONS FOR DRIVING PURPOSES.

$8. First premium to A. B. Forbes, Byfield, for Stallion "Terranta."

$5. Second premium to Rial Side stock farm, Beverly, for Stallion "Col. Osgood."

$5 and diploma to Rial Side stock farm, Beverly, for 3 year old Stallion "Pure Red."

$3. Second premium to A. R. Lewis, Bradford, for 3 year old Stallion "Starr Nelson."

$5 and diploma to Robert M. Leach, Danvers, for Morgan Coach Stallion "Gen. Lothair."

O. S. Butler, Sherman Nelson, Benj. P. Ware, S. B. George—*Committee.*

FAMILY HORSES.

$6. First premium to A. B. Forbes, Byfield, for Chestnut Mare "Sylvia."

$4. Second premium to Edwin Bates, Lynn, for Bay Mare.

Francis H. Appleton, Charles A. Lunt, B. P. Pike—*Committee.*

BROOD MARES.

$8. First premium to A. B. Forbes, Byfield, for Bay Mare "Clayene."

GENTS' DRIVING HORSES.

$8. First premium to Byron G. Kimball, Bradford, for pair Driving Horses.

$5. Second premium to Charles Sanders, Peabody, for pair Driving Horses.

$6. First premium to Rial Side stock farm, Beverly, for Single Horse.

$4. Second premium to A. B. Forbes, Byfield, for Horse "Varica."

SINGLE FARM HORSES.

$6. First premium, to W. L. Hill, Peabody, for black horse, weight 1375 lbs.

$4. Second premium, to F. W. Lyford, Danvers, for horse, weight 1250 lbs.

$6. First premium, to B. H. Farnham, No. Andover, for horse, weight 1125 lbs.

$4. Second premium, to Arthur Durkee, Peabody, for brown mare, weight 1150 lbs.

Edward A. Fuller, Geo. M. Roundy, H. M. Goodrich, S. H. Bailey—*Committee.*

PAIRS OF FARM HORSES WEIGHING OVER 2500 LBS.

$8. First premium, to James C. Poor, No. Andover, for pair horses, weight 2800 lbs.

Sherman Nelson, Isaac C. Day, I. F. Knowlton—*Committee.*

PAIRS OF FARM HORSES WEIGHING LESS THAN 2500 LBS.

$8. First premium, to James C. Poor, No. Andover, for pair horses, weight 2440 lbs.

$5. Second premium, to Charles S. Little, Merrimac, for pair horses, weight 2250 lbs.

B. F. Barnes, M. C. Pettingill, M. H. Connor—*Committee.*

COLTS FOR FARM PURPOSES, THREE AND FOUR YEARS OLD.

$6. First premium, to W. L. Hill, Peabody, for 4-year-old colt.

$4. Second premium, to James C. Poor, No. Andover, for 4-year-old colt.

S. D. Hood, D. D. Adams, G. W. Sargent—*Committee.*

COLTS FOR DRIVING PURPOSES, THREE AND FOUR YEARS OLD.

$6. First premium, to D. F. Duffy, Andover, for 4-year-old bay colt.

$4. Second premium, to D. P. Rogers, Salem, for 4-year-old brown colt.

$5. First premium, to H. H. Demsey, Wenham, for 3-year old colt.

$3. Second premium, to D. L. Story, Beverly, for 3-year-old brown colt.

Edwin Bates, E. P. Barrett, J. J. Gould, O. F. Newhall —*Committee.*

COLTS FOR DRIVING PURPOSES, ONE AND TWO YEARS OLD.

$4. First premium, to W. F. Kinsman, Ipswich, for 2-year-old stallion colt.

$2. Second premium, to A. B. Forbes, Byfield, for 2-year-old stallion colt.

$4. First premium, to W. F. Kinsman, Ipswich, for one-year-old filly.

$2. Second premium, to Rial Side Stock Farm, Beverly, for one-year-old colt.

$4. First premium, to A. B. Forbes, Byfield, for two-year-old bay filly.

$2. Second premium, to H. H. Demsey, Wenham, for 2-year-old filly.

Richard Newell, A. E. Lufkin, Fred H. Bates—*Committee.*

SWINE, LARGE BREEDS.

$5. First premium, to W. L. Hill, Peabody, for Cheshire boar.

$5. First premium, to W. L. Hill, Peabody, for Cheshire sow and pigs.

$5. First premium, to W. L. Hill, Peabody, for Chester white boar.

$5. First premium, to W. L. Hill, Peabody, for Chester white sow and pigs.

$5. First premium, to W. L. Hill, Peabody, for 7 Chester white weaned pigs.

$5. First premium, to W. L. Hill, Peabody, for Yorkshire boar.

$5. First premium, to W. L. Hill, Peabody, for Poland China pigs.

$3. Second premium, to W. L. Hill, Peabody, for Ohio Imp. Chester boar.

$3. Second premium, to W. L. Hill, Peabody, for 7 weaned pigs.

George A. Dow, E. C. Little, W. K. Cole—*Committee.*

SWINE, SMALL BREEDS.

$5. First premium, to W. L. Hill, Peabody, for medium Yorkshire boar.

$3. Second premium, to W. L. Hill, Peabody, for small Yorkshire boar.

$5. First premium, to Frank Stanley, Peabody, for Yorkshire sow and pigs.

$3. Second premium, to John P. Collins, Peabody, for Yorkshire sow and pigs.

W. K. Cole, George A. Dow, J. W. Yeaton, E. C. Little —*Committee.*

SHEEP.

$5. First premium, to Lewis P. Hawkes, Saugus, for Shropshire buck.

$5. First premium, to Lewis P. Hawkes, Saugus, for ten Shropshire sheep.

$4. First premium, to Lewis P. Hawkes, Saugus, for Shropshire lambs.

Thomas P. Hale, George A. Dow, N. W. Moody—*Committee.*

POULTRY.

$1.00. First premium, to C. L. Beckett, Peabody, for light Brahma Fowls.

.50. Second premium, to C. L. Beckett, Peabody, for light Brahma Fowls.

.50. Second premium, to C. L. Beckett, Peabody, for light Brahma Chicks.

.50. Second premium, to C. L. Beckett, Peabody, for Plymouth Rock Fowls.

.50. Second premium, to C. L. Beckett, Peabody, for Plymouth Rock Chicks.

$1.00. First premium, to C. L. Beckett, Peabody, for Golden Polish Fowls.

$1.00. First premium, to C. L. Beckett, Peabody, for Buff Cochin Bantam Fowls.

$1.00. First premium, to C. L. Beckett, Peabody, for Buff Cochin Bantam Chicks.

.50. Second premium, to C. L. Beckett, Peabody, for Buff Cochin Bantam Chicks.

$1.00. First premium, to C. L. Beckett, Peabody, for Golden Seabright Bantam Fowls.

$1.00. First premium, to Walter H. Beckett, Peabody, for Red Game Bantam Chicks.

$1.00. First premium, to C. L. Beckett, Peabody, for Red Game Bantam Fowls.

$1.00. First premium, to Wm. E. Sheen, Peabody, for Brown Leghorn Fowls.

$1.00. First premium, to Wm. E. Sheen, Peabody, for Brown Leghorn Chicks.

$1.00. First premium, to Arthur W. Beckford, Danvers, for Houdan Fowls.

$1.00. First premium to Arthur W. Beckford, Danvers, for Houdan Chicks.

$1.00. First premium, to Arthur W. Beckford, Danvers, for S. L. Wyandotte Chicks.

.50. Second premium, to S. C. Knapp, Peabody, for Brown Leghorn Chicks.

.50. Second premium, to R. H. Hamilton, Peabody, for White Leghorn Chicks.

$1.00. First premium, to R. H. Hamilton, Peabody, for White Leghorn Fowls.

.50. Second premium, to R. H. Hamilton, Peabody, for Polish Fowls.

$1.00. First premium, to H. A. Harrington, Peabody, for Indian Game Chicks.

$1.00. First premium, to H. A. Harrington, Peabody, for Plymouth Rock Fowls.

$1.00. First premium, to H. A. Harrington, Peabody, for Plymouth Rock Chicks.

.50. Second premium, to M. J. Cain, Lynn, for Pekin Ducks.

$1.00. First premium, to John C. Jodrey, Danvers, for S. L. Wyandotte Chicks.

.50. Second premium, to John C. Jodrey, Danvers, for S. L. Wyandotte Chicks.

$1.00. First premium, to John C. Jodrey, Danvers, for G. L. Wyandotte Chicks.

$1.00. First premium, to Elmer C. Durkee, Peabody, for Light Brahma Chicks.

$1.00. First premium to Charles E. Symonds, Salem, for Japanese Game fowls.

$1.00. First premium to H. E. Rice, Middleton, for Black Java chicks.

$1.00. First premium to M. S. Perkins, Danvers, for Toulouse Geese.

$1.00. First premium to J. Hanna & Son, Groveland, for Pekin Breeding ducks.

$1.00. First premium to E. R. Perkins, Salem, for White Woodland fowls.

$1.00. First premium to E. R. Perkins, Salem, for White Woodland chicks.

D. B. Wallace—*for the Committee.*

PLOUGHING WITH DOUBLE TEAMS.

$8. First premium to James C. Poor, No. Andover, four horses.

Walter I. Chadwick, Alvin Smith, L. H. Bailey, S. N. Curtis, A. A. Rutherford—*Committee.*

PLOUGHING WITH TWO HORSES.

$6. First premium to T. C. Durkee, Peabody, Landside plough.

$4. Second premium to G. Dynneson, Peabody, Landside plough.

W. S. Phillips, Jr., F. W. Lyford, A. B. Fellows, B. H. Farnham, George Pratt—*Committee.*

PLOUGHING WITH SINGLE OX TEAMS.

$6. First premium to F. G. Kimball, Danvers, Swivel-plough.

Moses H. Poor, Horace Lane, James E. Page, J. W. Yeaton—*Committee.*

PLOUGHING WITH SULKY PLOUGH.

$6. First premium to O. F. Newhall, Peabody, "National."

Henry O. Verry, Andrew Dodge, Samuel T. Poor—*Committee.*

PLOUGHING BY BOYS LESS THAN FIFTEEN YEARS OF AGE.

$8. First premium to Charles S. Little, Merrimac. "Hussey," No. 102.

H. G. Herrick—*for Committee.*

HARROWS.

$6. First premium to J. L. Colcord, Peabody, for improved spring tooth harrow.

$4. Second premium to J. L. Colcord, Peabody, for Tyler's Disc harrow.

Benjamin P. Ware—*for the Committee.*

CARRIAGES.

$3. Gratuity to T. W. Lane, Amesbury, for Stanhope Corning buggy.

$2. Gratuity to T. W. Lane, Amesbury, for Republican wagon.

$1. Gratuity to T. W. Lane, Amesbury, for Concord wagon.

$5. Gratuity to Dole & Osgood, Peabody, for Queen Phæton and two light express wagons.

George E. Daniels, J. H. Perkins, Aaron Sawyer—*Committee.*

AGRICULTURAL IMPLEMENTS.

$8. And diploma to J. L. Colcord, Peabody, for collection of implements.

$4. Premium to S. J. Pedlar, Methuen, for horse cart.

$1. Premium to S. J. Pedlar, Methuen, for sled runner.

$4. Premium to S. D. Hinxman, No. Andover, for bent axle wagon.

$2. Premium to George E. Daniels, Rowley, for pair of wheels.

$1. Premium to J. D. Dodge, Rowley, for marsh shoes.

$1. Premium to Daniel Fuller, Topsfield, for storm door for carriage.

Honorable mention of J. Stanley Bell's exhibit of mowers.

THE EXHIBITION OF AGRICULTURAL IMPLEMENTS.

In quantity the exhibition of Agricultural Implements was not equal to that of average years, but this was more than made up by the quality of the exhibit. The principal exhibitor was J. L. Colcord, of Peabody. There is this

advantage in having a dealer exhibit,—over that made by a manufacturer; while the latter is confined to the product of his own ideas, that of the former presents the ideas of many minds. Mr. Colcord's exhibit was unusually valuable. It contained the latest improvement in cultivators, mowing machines, paris green distributors, pea, corn and bean planters, potato diggers, and fertilizer distributors. I have used all of these but the cultivator on my farms, and can fully endorse their merits. Why will my brother farmers continue the application of paris green in the old fashioned bulky way, by reducing with plaster or water, where they can obtain just as good results by applying it pure from a cyclone exterminator or Leggett gun? It takes no more of the powder to do the work and it can be done in half the time, and will be just as efficacious. Why should we lug around 250 pounds of water on our backs, when a single pound of paris green blown on the vines, will accomplish as good results? We sometimes have our potato vines injured when we apply the paris green diluted in water. This is because either very cold water has been used on a hot day or, what is more likely, the free arsenic in it has been dissolved by the water, and this always blasts wherever it touches. By using the powder undissolved we avoid most of this injury, indeed avoid it entirely unless a rain follow directly after its application. Several patent powders have been put upon the market to take the place of the paris green, but as a rule they are good just as far as they have the paris green in them. The Aspinwall pea, bean and corn planter. I have used for several years, and am much pleased with it. I have several other planters, but this in about every instance is the one used. To enable the farmer to plant seed of various sizes a variety of slides are needed, and these can be readily obtained. Hallock's potato digger I have used for two seasons, it is a double-mould-board plow, with a series of rods trailing on each side. The potatoes are turned out upon these rods and

carried along until they are dropped off at their ends. After picking up all that can be seen, a harrowing of the ground will bring to light as nearly all that are left as is secured in average hand digging. Where the most thorough work is aimed at, the soil thrown out can be stirred with a potato hook. Mr. Colcord also exhibited an improved cultivator, which had a shoe so attached to the hind tooth that by the use of a lever attachment the level of the wheel and the position of the hind tooth could be so altered that the implement would rest entirely on the wheel and shoe attachment, thus enabling the farmer to transport it from place to place without the teeth touching the ground. The width of the implement could also be instantly adjusted to a very narrow row. He also exhibited a Stradler cultivator, to go each side of the row. I have had one on my farm a couple of years and find it very useful, especially for cabbage. Each half is completely in the control of the person handling it, being independent of each other, and can be run as near or far from the crop as may be desired. The teeth are set at the right angle to plunge deep in the soil, which makes it a capital implement for eradicating twitch grass. It is a two horse machine. Another useful implement exhibited by Mr. Colcord, was the Spangler fertilizer distributor. I have had this in use for several years and think highly of it, though I have usually hitched on a few links of chain when distributing a liberal quantity to help in the mixing with the soil. The past season I have had in use a broad-cast fertilizer, made by the same firm on the same principle. It works first rate. We have probably broad-casted over forty tons with it the past season. They are made on the force feed principle and hence are not liable to clog with almost any fertilizer, yet I find it does its best work when about half filled. We feed it from bags of fertilizer dropped at the ends and middle of the piece. The storm door invented by Mr. David Fuller of Topsfield, to protect drivers from

storms, opening as it did to the middle and presenting at the same time something to grasp in getting into the vehicle, appeared to be an excellent device. Mr. Fuller informed the committee that he had sold about one hundred of them at $2.50 each. Another piece of excellent good work was sled runners with the curve made by bending and trunneling together narrow white oak plank, thus obviating the necessity of wide plank and saving waste in material. It was exhibited by Mr. S. J. Pedlar, of Methuen. To Mr. Pedlar was also awarded a premium for the best horse cart, his having a decided advantage over others in having the tire overlap the fellies, and have a rounded edge. The committee would have preferred to have awarded the premium to a single horse cart, which is far more readily handled in common farm work, besides being very much lighter (for the two horse carts on exhibition weighed in the close vicinity of a ton each), but the only one on exhibition showed no peculiar merits.

For the committee,

J. J. H. Gregory, chairman.

IN EXHIBITION HALL.

BREAD AND CANNED FRUIT.

$2.00. First premium, to Mrs. Ellen Condon, Peabody, for white bread.

$1.50. Second premium, to Mrs. C. H. Goulding, Peabody, for white bread.

$1.00. Gratuity, to Olivia J. Spencer, Peabody, for white bread.

$2.00. First premium, to Olivia J. Spencer, Peabody, for graham bread.

$1.00. Second premium, to Mrs. Lizzie Wilson, Beverly, for graham bread.

.50. Gratuity to Mrs. Lizzie Wilson, Beverly, for rice bread.

$1.00. First premium, to Mrs. Otis Brown, Peabody, for oatmeal bread.

.50. Gratuity to Mrs. C. H. Goulding, Peabody, for oatmeal bread.

$1.00. First premium, to Mrs. Annie L. Cole, Boxford, for brown bread.

.50. Second premium, to Miss Clara L. Bailey, Andover, for brown bread.

$2.00. First premium, to C. E. Jackson, Peabody, for case of assorted bread.

$1.00. First premium, to S. W. King, Peabody, for cake.

$2.00. First premium, to Mrs. D. P. Grosvenor, Peabody, for 12 jars canned fruit.

$1.00. Second premium, to Mrs. J. H. Ellsworth, Peabody, for 6 jars canned fruit.

$1.00. First premium, to Mrs. C. H. White, Danvers, for three kinds of jelly.

$1.00. Gratuity, to Miss S. B. Herrick, Peabody, for green grape jelly.

Mrs. J. H. Perkins, Mrs. N. M. Quint, Mrs. E. A. Emerson—*Committee.*

STATEMENT OF WHITE BREAD, MADE BY ELLEN CONDON.

One quart of white flour, one pint of scalded milk, one half cake of compressed yeast, one teaspoonful of salt. Mix at night, put in pan in the morning, let it rise till light. Bake one hour.

STATEMENT OF WHITE BREAD, MADE BY MRS. C. H. GOULDING.

One and one half cups of milk, one third cup of yeast, or one-third of a compressed yeast cake, flour enough to knead, rise over night. In the morning cut down with a knife, let it rise slightly again, then knead and put in pan to bake, when risen enough to be light, bake three quarters of an hour.

STATEMENT OF WHITE BREAD, MADE BY OLIVIA J. SPENCER.

Two cups of milk, two cups warm water, one tablespoonful of lard, one tablespoonful of sugar, two and one half quarts of flour, one heaping teaspoonful of salt. The flour used was Haxall. Put the milk, lard and sugar on the fire, letting them just come to a boil, add the water warm, and let cool till luke-warm, add one small cup of yeast, the salt and enough of the flour for a stiff batter and set it to rise, this should be about five o'clock, at nine o'clock knead enough only to mix in the rest of the flour. In the morning knead a little, and put in the pan, using no additional flour. Let it stand one hour, then bake one hour. The yeast used was made from potatoes, hops and flour.

STATEMENT OF GRAHAM BREAD, MADE BY OLIVIA J. SPENCER.

One and one half cups of water, one and one half cups of white flour, one half cup of yeast, one teaspoonful of salt, one half cup of molasses, two heaping cups of graham flour. At night make a batter of the water and white flour, add the yeast and salt. In the morning add the molasses and graham flour. Let it rise two hours. Bake three quarters of an hour.

STATEMENT OF GRAHAM BREAD, MADE BY MISS LIZZIE J. WILSON.

Two cups of graham flour, one cup of white flour, one tablespoonful of bran, one half cup of yeast, a little molasses, one teaspoonful of salt, make as stiff as can be stirred with a spoon. Let it rise over night. In the morning bake one hour in a moderate oven. This quantity makes one loaf.

STATEMENT OF RICE BREAD, MADE BY LIZZIE J. WILSON.

One pint of ground rice, one quart of wheat flour, one pint of milk, and one pint of hot water, one teaspoonful of salt, two teaspoonfuls of sugar, one compressed yeast cake, rise until light. Put into pan and rise one hour. Bake in a moderately hot oven, one hour and ten minutes. This makes two loaves.

STATEMENT OF OATMEAL BREAD, MADE BY MRS. C. H. GOULDING.

One cup of oatmeal, one-third cup of molasses, level tablespoonful of butter, turn into this two cups of boiling water, when cool add one half cup of yeast, or one half compressed yeast cake, flour enough to knead. Mix at night, put in the pan in the morning and bake one hour.

STATEMENT OF BROWN BREAD MADE BY MRS. ANNA L. COLE.

Two cups of Indian meal, three cups of rye meal, one small cup of molasses, one pint of water, one teaspoonful of soda, one teaspoonful of salt. Steam three hours.

STATEMENT OF BROWN BREAD MADE BY CLARA L. BAILEY.

Two cups of Indian meal, two cups Haxall flour, two-thirds cup of molasses, two teaspoonfuls of soda, two and one-half cups of cold water, a little salt. Steam four hours.

STATEMENT OF THE METHOD OF CANNING BY MRS. D. P. GROSVENOR.

Fresh fruit, raspberries and blackberries. Fill the jars with fruit. Make a syrup of one cup of sugar to one quart of water. Place the jars in cold water and fill with the syrup, placing the glass covers on the jars, after boiling ten minutes, take from the water, and put on the rubber rings and seal at once.

PEARS.

Make a syrup of a half pound of sugar to one pound of fruit, put the fruit in, and let it boil till transparent.

JAM.

Mash the fruit, and add a half pound of sugar to one pound of fruit. Just let it come to a boil.

STATEMENT OF METHOD OF CANNING VEGETABLES AND FRUITS BY MRS. H. L. ELLSWORTH.

CORN.

Cut the corn fresh from the cob, into the jars, pressing it down hard, until within one inch of the top, seal the jars making them air tight, put the jars in cold water and

when it comes to a boil, continue to boil them for three hours. See that the jars are air tight after they have boiled, then cover with paper to keep out the light. The jars are not to be uncapped after boiling until wanted for use.

TOMATOES.

Take sound ripe tomatoes and turn boiling water on them, peel and put in kettle with just enough water to keep from burning, boil twenty minutes and bottle. Be sure and have the jars full.

STRING BEANS.

Take string or butter beans and boil till tender, fill the jars full, seal, putting paper around the jars to keep out the light.

PEARS.

Take sound pears and cut in halves and put in cold water to keep from turning, make a syrup of a cup of sugar and two cups of water, and boil ten minutes, then put in the fruit and boil twenty minutes ; measure with large cups.

PEACHES.

Take sound ripe peaches, peel and half. Make a syrup of one cup of sugar, two large cups of water, and boil ten minutes, then put in the fruit and boil until you can pierce a straw through them.

PRESERVED GREEN TOMATOES.

Take sound green tomatoes and to one pound of fruit put three-fourths of a pound of sugar, add two lemons to three pounds fruit, add one pint of water, cook three hours.

METHOD OF JELLY MAKING BY MRS. C. H. WHITE.

BARBERRY JELLY.

Pick over the barberries and wash them. Put them into the preserving kettle, and to every four quarts of

berries allow three pints of water, and one dozen sour apples quartered and cored. Boil slowly until apples and berries are soft, then turn into the jelly bag and drain off the juice without squeezing. Boil the juice twenty minutes, skim and measure, and to each cup of juice use a generous cupful of sugar, boil until it jellies, which will sometimes take thirty minutes. Pour into tumblers and after three or four days cover with paper.

GRAPE JELLY.

The wild grapes gathered just as they begin to turn, are the best for jelly. Wash the grapes and free them from the stems. Put them in the kettle, and mash them until all are broken. Heat slowly, and cook until the juice is well drawn out. Then strain through a jelly bag made of nice all wool white flannel. Measure the juice, and allow an equal measure of sugar. Boil the juice fifteen minutes, skim and strain again, then add the sugar and boil till the surface looks wrinkled and the liquid jellies on the edge, skim well and turn into glasses.

APPLE JELLY.

Wash the apples, remove the blossom end, and cut in small pieces, but do not pare or core, for the skin and seeds improve the color and quality of the jelly, cover with cold water, and cook gently until soft, turn into the jelly bag and hang the bag up so that it may drip as long as it will, but do not squeeze. Allow half pound of sugar to a pint of juice. Boil the juice alone until it begins to thicken on the edge of the pan. Put in the sugar hot and skim. Boil until it jellies and turn into glasses.

METHOD OF MAKING GREEN GRAPE JELLY BY MISS S. B. HERRICK.

Green grapes, cultivated, stewed and strained through flannel. Strain through cheese-cloth, measuring the juice. Use equal quantities of juice and sugar. Heat the

sugar in the oven and add to the juice which has boiled twenty minutes. Boil both juice and sugar five minutes, strain again through cheese-cloth into a heated pitcher. Then pour into tumblers.

PEARS.

$2.00. First premium, to P. P. Cotter, Salem, for Bartlett.

2.00. First premium, to H. A. Harrington, Peabody, for Belle Lucrative.

2.00. First premium, to Edwin Bates, Lynn, for Bosc.

2.00. First premium, to Charles E. Browne, Peabody, for d'Anjou.

2.00. First premium, to Edwin Bates, Lynn, for Duchess de Angouleme.

2.00. First premium to J. F. Moore, Peabody, for Dana's Hovey.

2.00. First premium, to W. K. Dodge, Salem, for Lawrence.

2.00. First premium, to Edwin Bates, Lynn, for Bon de Jersey.

2.00. First premium, to P. M. Neal, Lynn, for Onandago.

2.00. First premium, to C. B. Haven, Peabody, for Paradise d'Automne.

2.00. First premium, to Fred Lamson, Salem, for Seckel.

2.00. First premium, to Robert Lindsay, Lawrence, for Sheldon.

2.00. First premium, to Walter B. Allen, Lynn, for Urbaniste.

2.00. First premium, to Edwin Bates, Lynn, for Vicar.

2.00. First premium, to T. T. Bailey, Peabody, for Comice.

2.00. First premium, to W. Burke Little, Newbury, for Clairgeau.

2.00. First premium, to G. D. Walton, Peabody, for Howell.

5.00. First premium, to Edwin Bates, Lynn, for collection.
1.00. Gratuity, to Elmer Willis, Lynn, for Bartlett.
1.00. Gratuity, to Charles E. Brown, Peabody, for Belle Lucrative.
1.00. Gratuity, to W. Burke Little, Newbury, for Bosc.
1.00. Gratuity, to W. Burke Little, Newbury, for d'Anjou.
1.00. Gratuity to H. A. Harrington, Peabody, for Duchess.
1.00. Gratuity, to Walter B. Allen, Lynn, for Lawrence.
1.00. Gratuity, to S. J. Barr, Lawrence, for Bon de Jersey.
1.00. Gratuity to P. M. Neal, Lynn, for Paradise d'Automne.
1.00. Gratuity, to Edwin Bates, Lynn, for Seckel.
1.00. Gratuity, to Edwin Bates, Lynn, for Sheldon.
1.00. Gratuity, to H. W. Munroe, Lynnfield, for Urbaniste.
1.00. Gratuity, to J. E. T. Bartlett, Peabody, for Buerre Hardy.
1.00. Gratuity, to Sylvester Parrott, Lynn, for Fulton.
1.00. Gratuity, to H. B. Leonard, Danvers, for de Congress.
50c. Gratuity, to G. D. Walton, Peabody, for Buerre Hardy.
50c. Gratuity, to J. W. Goodell, Lynn, for Fulton.

P. M. Neal, George W. Chadwick, W. H. B. Currier—*Committee.*

APPLES.

$2.00. First premium, to Mrs. B. W. Moore, Peabody, for Baldwin.
2.00. First premium, to Lyman Osborn, Peabody, for Danvers Sweet.
2.00. First premium, to T. P. Hale, Rowley, for Tompkins King.
2.00. First premium, to S. F. Newman, Newbury, for Tolman's Sweet.

2.00. First premium, to Geo. F. Sanger, Peabody, for Drap d'Or.

2.00. First premium, to Charles F. Knight, Newbury, for H. Nonsuch.

2.00. First premium, to J. C. George, Danvers, for Porter.

2.00. First premium, to Mrs. David Warren, Swampscott, for Pickman Pippins.

2.00. First premium, to S. F. Newman, Newbury, for Roxbury Russett.

2.00. First premium, to B. P. Ware, Marblehead, for R. I. Greening.

2.00. First premium, to W. Winchester, Peabody, for Sweet Baldwin.

2.00. First premium, to Mrs. B. W. Moore, Peabody, for Gravenstein,

2.00. First premium, to Daniel H. Ilsley, Newbury, for Hunt's Russett.

2.00. First premium, to W. Burke Little, Newbury, for Smith's Cider.

2.00. First premium, to Benj. K. Horton, Peabody, for Snow.

1.50. First premium to Mrs. A. Kempt, Peabody, for Hyslop Crab.

1.00. Gratuity, to Mary A. Noyes, Lynn, for Fall Harvey.

1.00. Gratuity, to George D. Walton, Peabody, for Walton Apple.

1.00. Gratuity, to W. Burke Little, Newbury, for McIntosh.

1.00. Gratuity, to George W. Richardson, Lynn, for Wealthy.

1.00. Gratuity, to Asa Sawyer, Peabody, for Golden Russett.

1.00. Gratuity, to Augustus Verry, Danvers, for Wagner.

1.00. Gratuity, to Albert H. Merrill, Peabody, for Peabody Apple.

1.00. Gratuity, to Blake & Johnson, Peabody, for Codling Apple.

1.00. Gratuity, to Mary A. Noyes, Lynn, for Sudbury Sweet.

.50c. Gratuity, to Walter Butman, Peabody, for Hyslop Crab.

50c. Gratuity, to T. P. Hale, Rowley, for Crab Apple.

.50c. Gratuity, to C. K. Hutchinson, Peabody, for Porter.

.50c. Gratuity, to W. Burke Little, Newbury, for Tolman's Sweet.

.50c. Gratuity, to David M. Cole, Boxford, for Roxbury Russett.

50c. Gratuity, to B. W. Foss, Rowley, for Crab Apples.

.50c. Gratuity, to George D. Walton, Peabody, for Hass Apple.

50c. Gratuity, to Charles F. Knight, Newbury, for Snow.

.50c. Gratuity, to William Perkins, 2nd, Peabody, for Gravenstein.

.50c. Gratuity, to Henry Verry, Danvers, for Gravenstein.

T. C. Thurlow, A. C. Osborn, B. F. Huntington, John Perkins—*Committee.*

PEACHES, GRAPES AND ASSORTED FRUIT.

$2.00. First premium, to Andrew N. Jacobs, Peabody, for white flesh peach.

2.00. First premium, to Albert Poor, Peabody, for yellow flesh peach.

.50. Gratuity, to C. B. Haven, Peabody, for seedling peach.

.50. Gratuity, to Mary A. Noyes, Lynn, for Crawford peach.

.50. Gratuity, to H. B. Leonard, Peabody, for stump of the world.

.50 Gratuity, to Charles F. Knight, Newbury, for Crawford peach.

3.00. First premium, to J. W. Goodell, Lynn, for Hartford grapes.

4.00. First premium, to James M. Teele, Lynn, for Black Hamburg grapes.

3.00. First premium, to James M. Teele, Lynn, for Brighton grapes.

3.00. First premium, to Michael Shea, Lawrence, for Niagara grapes.

3.00. First premium, to C. B. Haven, Peabody, for Delaware grapes.

3.00. First premium, to E. A. Richards, Lynn, for Moore's early grapes.

3.00. First premium, to Edwin Bates, Lynn, for Concord grapes.

3.00. First premium, to Edwin Bates, Lynn, for Worden grapes.

3.00. First premium, to Mrs. M. N. Moore, Peabody, for Martha grapes.

7.00. First premium, to Edwin Bates, Lynn, for collection of grapes.

7.00. Gratuity, to W. P. Hutchinson, Danvers, for collection of grapes.

.50. Gratuity, to G. D. Walton, Peabody, for natural grape.

1.00. Gratuity, to Thos. H. Jackman, Peabody, for Pocklington grapes.

.50. Gratuity, to A. C. Osborn, Peabody, for Concord grapes.

.50. Gratuity, to A. C. Osborn, Peabody, for Hartford grapes.

.50. Gratuity, to A. C. Osborn, Peabody, for Niagara grapes.

.50. Gratuity, to A. C. Osborn, Peabody, for Peabody grapes.

.75. Gratuity, to A. C. Osborn, Peabody, for Maud S. grapes.

.50. Gratuity, to C. B. Haven, Peabody, for Concord grapes.

1.00. Gratuity, to C. L. Beckett, Peabody, for Black Hamburg grapes.

1.50. Gratuity, to C. L. Beckett, Peabody, for Pocklington grapes.

1.00. Gratuity, to E. A. Richards, Lynn, for Eaton grapes.

.50. Gratuity, to J. F. Moore, Peabody, for Moore's early grape.

.50. Gratuity, to Otis Brown, Peabody, for Lee's early grapes.

1.00. Gratuity, to W. P. Hutchinson, Danvers, for Brighton grapes.

.50. Gratuity, to W. P. Hutchinson, Danvers, for early Victor grapes.

.50. Gratuity, to Alonzo Raddin, Peabody, for Moore's Diamond grapes.

.50. Gratuity, to Edwin Bates, Lynn, for Niagara grapes.

.50. Gratuity, to S. J. Barr, Lawrence, for Concord grapes.

3.00. First premium, to G. T. Bailey, Peabody, for orange quinces.

1.00. Gratuity, to Albert H. Merrill, Peabody, for orange quinces.

2.00. First premium, to H. A. Harrington, Peabody, for golden drop plum.

2.00. First premium, to John Horner, Peabody, for Weaver plum.

2.00. First premium, to John Seastream, Peabody, for Lombard plum.

2.00. First premium, to Mrs. M. T. Osborn, Peabody, for Green Gage plum.

2.00. First premium, to Charles Knight, Newbury, for Purple Egg plum.

.50. Gratuity, to George W. Peabody, Wenham, for box blackberries.

J. W. Goodell, Nathaniel Dole, E. K. Lee, James W. Bond—*Committee.*

As chairman of the committee on grapes, peaches and assorted fruits, at the Essex Agricultural fair, held at Peabody, Sept. 17, 18 and 19, 1895, we would make the following additional report and suggestions. We were much gratified to see the extra large display of grapes, and the general good quality of the same. Also the increased attention to the earlier varieties which are pretty sure to ripen before the killing frosts appear.

Especially we would commend the efforts of Mr. A. C. Osborn in this direction, who exhibited three varieties raised by him from seed, all of which he claims to be as early as Moore's Early or Champion, we deem them worthy of the attention of grape growers, and if they develop quality as well as earliness, he surely should receive the esteem and favors of the society. Since the time of holding our Fair, E. W. Bull, the originator of the Concord grape, has passed on to his rewards, and this hardy grape of excellent quality is left as his legacy to a larger circle of mankind than any other known grape. It has, to us, only one known drawback and that is, now and then, being caught by frost. If its perfect ripening could be assured every year the legacy would be doubly rich, especially for all N. E. States.

In this connection we would call the attention of the Society to Moor's Diamond, a white grape of superior excellence of flavor and general appearance, and early ripening. The specimens exhibited on Sept. 17th were perfectly ripened, and excellent in quality, and in our opinion is one of the most promising early grapes for N. E. planting.

In passing judgment and awarding a premium on the collection of grapes, we found two collections only, these were piled upon large plates, one claiming to have eleven

and the other twelve varieties, the twelfth variety four bunches on a vine, after removing this vine and leaving eleven varieties in each exhibit, the two plates were to the minds of the committee of equal merit, and the conclusion was that the first premium should be divided equally between the two. But the officers decided that this could not be done. So one was given the first premium and the other the same amount as a gratuity. To avoid another occurrence of this kind we would advise that this article be changed that the collection of grapes *shall be* placed on plates of the several varieties of *two bunches* each, not less than *six varieties* (instead of *ten* as now) be required.

We have many grape growers who could compete with six varieties, and but very few who could show ten.

Peaches. We were pleased to see so good a display of seedling peaches, and in this connection we would like to be informed whether Essex County seedling means any seedling peach raised in Essex County or a particular variety, which has been shown at former fairs and claimed that name. We are of the opinion that no one variety should be allowed that sweeping claim.

Quinces. The exhibits were few and all of the orange variety. It appears to be an off year, either for quinces or quince growers.

Plums. The exhibit of plums was also small, but there was one exhibit by Mr. Knight, of Byfield, as green gages, but according to the books does not answer the description of that variety, being smaller, lighter color, earlier and sweeter than the green gage at that season of the year. It is a fruit of superior excellence and well worthy of the society's attention.

We were early taught that "Eternal Vigilance was the price of Liberty." In later years we have found that the same is true in regard to the price of *Marketable Fruit.*

We fear that many of our fruit growers have let their pruning shears rust from want of use. We are aware that

it requires a good degree of moral courage to stand before a good thrifty grape vine in midsummer and say "Thus far and no farther shalt thou go" or when a tree is heavily laden with fruit, go to work and clip off one third to one half the crop—or after the foliage has fallen head in a thrifty peach tree one third to one half of its season's growth.

But experience has clearly taught us that such methods are necessary to insure the best results.

We have got to *fight for the crop*, and that continually from the time of the first opening leaf and bud to the time of harvest, we must prune and spray and scrape and dig and fertilize—and fruit of first quality can only be obtained by the liberal use of ground bone—hard wood ashes, or potash. If the ground does not contain these elements, you must put them there.

J. W. GOODELL, *Chairman of Committee.*

PLANTS.

$5.00. First premium, to Harmony Grove Conservatories, for collection.

1.00. First premium, to Harmony Grove Conservatories, for Ferns.

50c. Gratuity, to Mrs. Clara M. Giles, Danvers, for Marguerite.

50c. Gratuity, to Mrs. C. Coalfleet, Peabody, for Gloxinia.

1.00. Gratuity to Mrs. W. B. Kimball, Peabody, for Begonia.

3.00. Gratuity, to J. M. Ward & Co., Peabody, for Specimen Plants.

1.00. Gratuity, to C. A. Buxton, Salem, for collection Coleus.

1.00. Gratuity, to R. B. MacIntosh, Peabody, for variety Native Ferns.

Edward E. Woodman, Ethel W. Brown, Elizabeth Hall, Ettore Tassinari—*Committee.*

FLOWERS.

$1.00. First premium, to Mrs. Clara M. Giles, Danvers, for Sweet Peas.

1.00. First premium, to E. A. Richards, Lynn, for Single Petunias.

1.00. First premium, to C. L. Beckett, Peabody, for pair Bouquets for vases.

1.00. First premium, to Mrs. A. Raddin, Peabody, for Hardy Phlox.

1.00. First premium, to F. E. Hobart, Peabody, for collection Garden Annuals.

3.00. First premium, to J. M. Ward & Co., Peabody, for Floral design Cultivated Flowers.

1.00. First premium, to W. J. Walton, Salem, for collection Coxcombs.

3.00. First premium, to Mrs. Julia A. Cain, Lynn, for collection 100 varieties Garden Flowers.

1.00. First premium, to Mrs. Julia A. Cain, Lynn, for twelve Double Geraniums.

1.00. First premium, to Mrs. Julia A. Cain, Lynn, for twelve Single Geraniums.

1.00. First premium, to A. L. Cain, Lynn, for twelve Salpioglossis.

1.00. First premium, to Albert E. Cain, Lynn, for twenty-four French Marigolds.

1.00. First premium, to Miss L. A. Cain, Lynn, for twenty-four African Marigolds.

1.00. First premium, to Mrs. Geo. E. Cain, Lynn, for twelve Nasturtiums.

1.00. First premium, to Mrs. Susie Vickary, Lynn, for Basket Native Wild Flowers.

1.00. First premium, to J. C. Vickary, Lynn, two bouquets Native Wild Flowers.

1.00. First premium, to J. C. Vickary, Lynn, for twenty-four Zinnias.

1.00. First premium, to C. L. Beckett, Peabody, for twelve Cannas.

1.00. First premium, to Miss Nancy P. Osborne, Peabody, for twenty-four Verbenas.

2.00. First premium, to Mary W. Nichols, Danvers, for collection of Native and Introduced Weeds.

1.00. First premium, to Miss Nancy P. Osborne, Peabody, for twenty-four Pansies.

2.00. First premium, to Emily F. Carlton, No. Andover, for design Native Flowers.

1.00. First premium, to Miss Nancy P. Osborne, Peabody, for twelve Gladiolas.

2.00. First premium, to T. C. Thurlow, West Newbury, for twenty-four Hardy Phlox.

1.00. First premium, to T. C. Thurlow, West Newbury, for twelve Hardy Phlox.

2.00. First premium, to T. C. Thurlow, West Newbury, for collection three varieties Japan Lilies.

.50c. Gratuity, to F. P. Grant, Beverly, for collection of Flowers.

50c. Gratuity, to F. P. Grant, Beverly, for collection Pompon Dahlias.

.50c. Gratuity, to F. P. Grant, Beverly, for collection White Asters.

.50c. Gratuity, to F. P. Grant, Beverly, for collection of Dianthus.

.50c. Gratuity, to Mrs. J. A. Cain, Lynn, for Basket of Everlastings.

.50c. Gratuity, to W. Wilson, Peabody, collection African Marigolds.

75c. Gratuity, to J. C. Bodge, Peabody, for collection Japan Lilies.

.50c. Gratuity, to F. C. Hobart, Peabody, for collection Tuberous Begonias.

.50c. Gratuity, to W. J. Walton, Salem, for collection Garden Flowers.

.50c. Gratuity, to W. J. Walton, Salem, for collection Scabiosas.

50c. Gratuity, to M. H. Merrill, Peabody, for collection Brugmangeas.

50c. Gratuity, to Dilla L. Newhall, Peabody, for Dish of Flowers.

50c. Gratuity, to Warren Bushby, Lynn, for collection Nasturtiums.

50c. Gratuity, to Mrs. N. M. Quint, Peabody, for collection Hardy Hydrangeas.

50c. Gratuity, to Mrs. Susie Vickary, Lynn, bouquets garden flowers.

50c. Gratuity, to Catherine F. Wardwell, Salem, for fall Anemones.

50c. Gratuity, to Catherine F. Wardwell, Salem, for Eupatorium.

2.00. Second premium, to E. F. Dwyer, Lynn, for collection 100 specimens garden flowers.

50c. Gratuity, to Emily F. Carlton, No. Andover, for dish of wild Violets.

50c. Gratuity, to Emily F. Carlton, No. Andover, for single Petunias.

50c. Gratuity, to Emily F. Carlton, No. Andover, for Drummond Phlox.

1.00. Gratuity, to T. C. Thurlow, West Newbury, for collection of Helianthus.

50c. Gratuity, to P. Heavey, Peabody, for Pompon Dahlias.

2.00. Gratuity, to C. H. Haskell, Lynn, for collection show Dahlias.

50c. Gratuity, to C. H. Haskell, Lynn, for Dahlias.

50c. Gratuity, to Harmony Grove Corporation, Salem, for floral design.

.50. Gratuity, to Harmony Grove Corporation, Salem, for basket choice flowers.

Mrs. Reuben Alley, Mrs. David Warren, Ettore Tassinari, Edward E. Woodman—*Committee.*

VEGETABLES—FIRST CLASS.

$2.00. First premium, to W. A. Jacobs, Danvers, for Edmunds beets.

2.00. First premium, to W. Burke Little, Newbury, for orange carrots.

2.00. First premium, to W. Burke Little, Newbury, for short horn carrot.

2.00. First premium, to W. Burke Little, Newbury, for Dewing's beets.

2.00. First premium, to R. H. Wilson, Peabody, for flat turnips.

2.00. First premium, to E. Pope Barrett, Peabody, for parsnips.

2.00. First premium, to Edwin Bates, Lynn, for mangold wurtzels.

2.00. First premium, to Andrew Lane, Rockport, for cranberries.

2.00. First premium, to W. K. Cole, Boxford, for ruta bagas.

2.00. First premium, to W. K. Cole, Boxford, for Eclipse beets.

2.00. First premium, to W. K. Cole, Boxford, for Perry's Hybrid corn.

2.00. First premium, to George Reynolds, Peabody, for Danvers carrots.

2.00. First premium, to A. D. Carlton, No. Andover, for late sweet corn.

1.00. Gratuity, to Edwin Bates, Lynn, for early sweet corn.

1.00. Gratuity, to W. K. Cole, Boxford, for late sweet corn.

1.00. Gratuity, to Charles Sanders, Peabody, for mangolds.

1.00. Gratuity, to O. F. Newhall, Peabody, for Edmunds beets.

Danvers Asylum had a fine collection of vegetables, but did not want them considered for a premium.

John Q. Evans, B. Frank Phillips, T. J. King—*Committee.*

VEGETABLES—CLASS TWO.

$2.00. First premium, to Henry Bushby, Peabody, for Hubbard squash.

2.00. First premium, to David Warren, Swampscott, for Warren squash.

2.00. First premium, to David Warren, Swampscott, for Stone Mason cabbage.

2.00. First premium, to David Warren, Swampscott, for Danvers onions.

2.00. First premium, to W. A. Jacobs, Danvers, for deep head cabbage.

2.00. First premium, to W. Burke Little, Newbury, for marrow squash.

2.00. First premium, to W. Burke Little, Newbury, for Clark's No. 1 potatoes.

2.00. First premium, to W. Burke Little, Newbury, for early Maine potatoes.

2.00. First premium, to W. Burke Little, Newbury, for red globe onion.

2.00. First premium, to W. Burke Little, Newbury, for yellow flat onion.

2.00. First premium, to H. A. Harrington, Peabody, for musk melon.

2.00. First premium, to J. G. Bodge, Peabody, for Savoy cabbage.

2.00. First premium, to W. J. Munroe, Lynnfield, for Livingstone tomatoes.

2.00. First premium, W. K. Cole, Boxford, for Hebron potatoes.

2.00. First premium, to W. K. Cole, Boxford, for Pearl of Savoy potatoes.

2.00. First premium to W. K. Cole, Boxford, for Drumhead cabbage.

2.00. First premium, to W. K. Cole, Boxford, for all seasons cabbage.

2.00. First premium, to George Reynolds, Peabody, for red cabbage.

2.00. First premium, to J. O. Goodale, Peabody, for Bay State squash.
2.00. First premium, to T. C. Durkee, Peabody, for L. F. tomatoes.
2.00. First premium, to T. C. Durkee, Peabody, for golden celery.
2.00. First premium, to J. W. Parkhurst, Boxford, for early rose potatoes.
2.00. First premium, to O. F. Newhall, Peabody, for nutmeg melon.
2.00. First premium, to O. F. Newhall, Peabody, for Salmon flesh melon.
2.00. First premium, to O. F. Newhall, Peabody, for collection of tomatoes.
1.00. Second premium, to W. A. Jacobs, Danvers, for Stone Mason cabbage.
1.00. Second premium, to W. K. Cole, Boxford, for red cabbage.
1.00. Second premium, to George Reynolds, Peabody, for Savoy cabbage.
1.00. Gratuity, to Henry Bushby, Peabody, for early North potatoes.
1.00. Gratuity, to David Warren, Swampscott, for new Queen potatoes.
1.00. Gratuity, to W. A. Jacobs, Danvers, for Marblehead squash.
1.00. Gratuity, to Robert H. Wilson, Peabody, for Henderson's cabbage.
1.00. Gratuity, to Robert H. Wilson, Peabody, for Brunswick cabbage.
1.00. Gratuity, to E. Pope Barrett, Peabody, for New Queen potatoes.
1.00. Gratuity, to T. C. Durkee, Peabody, for cauliflower.
1.00. Gratuity, to T. C. Durkee, Peabody, for Victor squash.
1.00. Gratuity, to T. C. Durkee, Peabody, for Danvers onions.

1.00. Gratuity, to J. W. Parkhurst, Boxford, for Hubbard squash.

1.00. Gratuity, to L. W. Goldthwaite, Danvers, for cauliflower.

1.00. Gratuity, to O. F. Newhall, Peabody, for celery.

1.00. Gratuity, to E. S. Keyes, Boxford, for Queen of the West potatoes.

1.00. Gratuity, to Blake & Johnson, Peabody, for Marrow squash.

Nathan A. Bushby, Geo. A. Rogers, John A. Putnam—*Committee.*

GRAIN AND SEED.

2.00. First premium, to D. M. Cole, Boxford, for 25 ears seed corn.

1.00. Second premium, to Edwin Bates, Lynn, for 25 ears pop corn.

1.00. First premium, to H. M. Killam, Boxford, for peck shelled corn.

1.00. First premium, to W. K. Cole, Boxford, for peck Brockton pole beans.

William B. Carlton, Francis H. Appleton, N. A. Bushby —*Committee.*

COUNTERPANES AND AFGHANS.

3.00. First premium, to Mrs. Wm. H. Sumner, Newburyport, for crochet quilt.

2.00. Second premium, to Mrs. S. P. Baker, Peabody, for crochet quilt.

2.00. Gratuity, to Mrs. Joseph Clothey, Peabody, for crochet quilt.

1.50. Gratuity, to Mrs. H. E. Hovey, Groveland, for silk quilt.

1.00. Gratuity, to Mrs. L. C. Foster, Danvers, for patch quilt.
1.00. Gratuity, to Mrs. Mary Prescott, Manchester, for print quilt.
.75. Gratuity, to Mrs. Thomas Doyle, Peabody, for crochet quilt.
.50. Gratuity, to Mrs. Emma French, Peabody, for patch quilt.
.75. Gratuity, to Mrs. T. C. P. Legro, Danvers, for crochet quilt.
1.00. Gratuity, to Mrs. Elizabeth H. Sanders, Ipswich, for silk quilt.
1.00. Gratuity, to Mrs. Mary F. Pierce, Peabody, for crochet quilt.
.75. Gratuity, to Elizabeth Eagan, Peabody, for afghan.
1.50. First premium, to Mrs. D. W. Crowley, Danvers, for afghan.
1.00. Gratuity, to Jennie Russell, Lynn, for afghan.
1.00. Gratuity, to Mrs. George B. Dennett, Danvers, for silk quilt.
1.00. Gratuity, to Mrs. Irene Pope, Danvers, for woollen quilt.
1.00. Gratuity, to Mrs. Irene Pope, Danvers, for silk quilt.
.75. Gratuity, to Mrs. Charles Williams, Salem, for woolen quilt.
.50. Gratuity, to Mrs. C. H. White, Danvers, for log cabin quilt.

Mrs. Richard Newell, Mrs. W. H. Sargent, Mrs. W. K. Cole—*Committee.*

CARPETINGS AND RUGS.

2.00. First premium, to Mrs. Charles E. Symonds, Salem, for braided rug.
1.00. Gratuity, to Mrs. C. E. Torrey, Salem, for drawn rug.

1.00. Gratuity, to Mrs. J. A. Dunn, Salem, for braided rug.
1.00. Gratuity, to Mrs. Mary O. Smith, Danvers, for braided rug.
1.00. Gratuity, to Mrs. Fred Wagner, Peabody, for drawn rug.
1.00. Gratuity, to Mrs. C. L. Towne, Salem, for drawn rug.
.50. Gratuity to Mrs. Moses Cook, Newburyport, for braided rug.
.50. Gratuity, to Mrs. Henry P. Woodbury, Beverly, for knit mat.
.50. Gratuity, to Mrs. James Hawley, Peabody, for drawn rug.
3.00. First premium, to Mrs. L. H. Richardson, Peabody, for rag carpeting.

Mrs. Annie L. Cole, Miss Rebecca T. Wood, Mrs. A. Raddin—*Committee.*

ARTICLES MANUFACTURED FROM LEATHER.

3.00. First premium, to Herbert Gardner, Peabody, for express harness.
2.00. Gratuity, to Joseph A. Poor, Peabody, for leather belting.
2.00. Gratuity, to C. J. Larrabee & Co., Peabody, for sheep kid.
2.00. Gratuity, to Manning & Conway, Peabody, for collection boots and shoes.
Diploma, to Franklin Osborn & Co., Peabody, for exhibit of leather.
Diploma, to Benj. W. Moore, Peabody, for exhibit of leather.
Diploma, to Newman Perkins & Son, Peabody, for split leather.
Honorable mention of A. C. Lawrence & Co., Peabody, for exhibit of white skins.

John Perkins, Lyman Osborn, H. N. Harriman—*Committee.*

MANUFACTURES AND GENERAL MERCHANDISE.

3.00. First premium, to Nellie L. Stockwell, Peabody, for display of bonnets.

2.00. Gratuity, to Joseph O. Fiske, Lynn, for cider mill.

1.00. Gratuity, to L. M. Symonds, Salem, for horse shoes.

1.00. Gratuity, to Joseph A. Roone, Peabody, for horse shoes.

2.00. Gratuity, to N. N. Dummer, Rowley, for manufactured cereals.

1.50. Gratuity, to George W. Adams, Newbury, for fertilizer.

1.50. Gratuity, to George W. Pratt, Peabody, for chairs and table.

1.00. Gratuity, to George A. Clifford, Peabody, for sample of graining.

.50. Gratuity, to Robert G. Estes, Peabody, for ships in bottles.

1.00. Gratuity, to William Martin, Salem, for shaving case.

.50. Gratuity, to William Martin, Salem, for railroad gate.

Diploma, to Marsh & Co., Lynn, for soaps.

Diploma, to William Gay & Son, Peabody, for soaps.

Diploma, to George S. Curtis, Peabody, for muscle oil.

Otis Brown, Mrs. N. M. Quint, Mrs. A. Raddin, W. Burke Little—*Committee.*

FANCY WORK.

2.00. Gratuity, to Mrs. J. P. Chase, Haverhill, for case of embroidery.

1.00. Gratuity, to Miss A. K. Thacher, Peabody, for Vienna table cloth.

2.00. Gratuity, to Miss M. O. Barrett, Peabody, for case of fancy work.

1.00. Gratuity, to Miss Ingeborg M. Potter, Lynn, for Hardanger embroidery.

1.00. Gratuity, to Mrs. H. F. Walker, Lynn, for tea cloth.

1.00. Gratuity, to Mrs. Eben Goldthwaite, Lynn, for table cover.

1.00. Gratuity, to Mrs. A. P. Newhall, Lynn, for pen and ink work.

1.00. Gratuity, to Mrs. C. E. Coffin, Newburyport, for side board scarf.

1.00. Gratuity, to Mrs. William M. Sumner, Newburyport, for hand point lace.

1.00. Gratuity, to Mrs. L. M. Pearson, Swampscott, for portiere.

1.00. Gratuity, to Mrs. Charles L. Osborn, Peabody, for centre piece.

1.00. Gratuity, to Mrs. Fred St. C. Herrick, Lawrence, for centre piece and doylies.

1.00. Gratuity, to Catherine B. West, Peabody, for centre piece.

1.00. Gratuity, to Miss Lilian Chandler, Salem, for centre piece and doylies.

1.00. Gratuity, to Miss Emma J. McHowell, Lynn, for two doylies.

.50. Gratuity, to Mrs. D. F. Parsons, Lynnfield, for lace handkerchief.

.50. Gratuity, to Mrs. James Rodie, Peabody, for handkerchief.

.50. Gratuity, to Vara A. Hinds, Peabody, for collar and apron.

.50. Gratuity, to Mrs. Cora Pope, Danvers, for centre piece.

.50. Gratuity, to Miss Ellen Donnell, Peabody, for centre piece.

.50. Gratuity, to Mrs. W. F. Porter, Beverly, for Mexican handkerchief.

.50. Gratuity, to Mrs. George A. Griffin, Salem, for crochet and edgeing.
.50. Gratuity, to Mrs. D. Woodbury, Peabody, for darned lace work.
.50. Gratuity, to Mrs. Edw. F. Dalton, Peabody, for centre piece.
.50. Gratuity, to Miss M. E. Lord, Peabody, for centre piece.
.50. Gratuity, to Mrs. D. B. Lord, Peabody, for centre piece.
.50. Gratuity, to Miss Grace Southwick, Peabody, for centre piece.
.50. Gratuity, to Mrs. M. O. Cutler, Peabody, for button holes.
.50. Gratuity, to Miss Bessie Goodridge, Peabody, for leather sofa pillow.
.50. Gratuity, to Mrs. George R. Norton, Peabody, for centre piece.
.50. Gratuity, to Mrs. Charles M. Poor, Peabody, for embroidery.
.50. Gratuity, to Mrs. D. P. Grovesnor, Peabody, for sofa pillow.
.50. Gratuity, to Mrs. D. P. Grovesnor, for table cover.
.50. Gratuity, to Miss N. McKenzie, Essex, for apron.
.50. Gratuity, to Mrs. Charles H. Poole, Peabody, for sofa pillow.
.50. Gratuity, to Miss Nellie Merrill, Peabody, for doylies.
.50. Gratuity, to Miss Mary Forness, Peabody, for toilet set.
.50. Gratuity, to Miss Lizzie A. Putnam, Newburyport, for centre piece and doylies.
.50. Gratuity, to Eva F. Coffin, Newburyport, for doylies.
.50. Gratuity, to Miss M. A. Southwick, Peabody, for bureau scarf.
.50. Gratuity, to Mrs. Annie W. Bushby, Peabody, for centre piece.

.50. Gratuity, to Miss N. M. Pierce, Peabody, for pillow slips.

.50. Gratuity, to Miss Mary Clifford, Peabody, for toilet set.

.50. Gratuity, to Miss Mary Clifford, Peabody, for lace handkerchief.

.50. Gratuity, to Miss L. E. Roberts, Peabody, for paper flowers.

.50. Gratuity, to Miss A. A. Little, Peabody, for netted work.

.50. Gratuity, to Mrs. C. H. Brooks, Peabody, for night robe.

.50. Gratuity, to Mrs. George Raddin, Peabody, for apron.

.50. Gratuity, to Mrs. William H. Sumner, Newburyport, for centre piece and doylies.

.50. Gratuity, to Mrs. N. K. Stanley, Newburyport, for honiton centre piece.

.50. Gratuity, to Miss Nellie Sumner, Newburyport, for centre piece.

.50. Gratuity, to Mrs. C. B. Martin, Newburyport, for baby dress.

.50. Gratuity, to Mrs. S. M. Pearson, Swampscott, for centre piece.

.50. Gratuity, to Mrs. Charles L. Osborn, Peabody, for lace collar and cuffs.

.50. Gratuity, to Mrs. George B. Price, Salem, for centre piece.

.50. Gratuity, to Mrs. A. W. Berry, Peabody, for knit doll.

.50. Gratuity, to Miss Elsie Goodridge, Peabody, for doylies.

.50. Gratuity, to Mrs. M. A. Brown, Lynn, for pillow slips.

.50. Gratuity, to Julia M. Smith, Danvers, for five pairs socks.

.50. Gratuity, to Annie W. Perkins, Lawrence, for centre piece.

Mrs. Amos P. Alley, Mrs. S. E. Merrill, Mrs. C. H. Brooks—*Committee.*

WORKS OF ART AND OIL PAINTINGS.

$2.00. Gratuity, to Miss Hattie F. Tenney, Byfield, for oil painting.

2.00. Gratuity, to Mrs. O. H. Wallace, Peabody, for roses in oil.

2.00. Gratuity, to Miss Bertha Goodhue, Beverly, for "Figure Pieces."

1.00. Gratuity, to Miss Jennie H. Marston, Danvers, for oil painting.

1.00. Gratuity, to F. H. Appleton, Peabody, for crayon.

1.00. Gratuity, to Mrs. P. J. Frye, Peabody, for crayon landscape.

1.00. Gratuity, to M. A. Tigh, Peabody, for oil painting.

1.00. Gratuity, to Lois M. Cummings, Andover, for oil painting.

1.00. Gratuity, to Alfred Wyman, Peabody, for pen and ink sketch.

1.00. Gratuity, to Fannie Teague, Peabody, for oil painting.

1.00. Gratuity, to Mrs. O. H. Wallace, Peabody, for landscape.

1.00. Gratuity, to Gertrude Stanwood, West Newbury, for original composition drawing.

1.00. Gratuity, to Gertrude Stanwood, West Newbury, for portraits.

.50. Gratuity, to Gertrude Barrett, Peabody, for strawberries in oil.

Mrs. Belle D. Hodgkins, Miss Lizzie G. Hathaway, Mrs. D. P. Grosvenor—*Committee.*

WATER COLORS AND DECORATED CHINA.

$2.00. Gratuity, to Mrs. N. G. Kimball, Bradford, for Landscape.

2.00. Gratuity, to Mrs. N. G. Kimball, Bradford, for Decorated China.

2.00. Gratuity, to Mrs. P. G. Dana, Peabody, for Water Color "Roses."

1.50. Gratuity, to Miss Alice E. Trask, Peabody, for Water Color.

1.00. Gratuity to Miss S.E.Dwyer, Salem, for Water Color.

1.00. Gratuity, to Miss Annie Symonds, Peabody, for Water Color.

1.00. Gratuity, to Miss Alice H. Berry, Peabody, for Painted China.

1.50. Gratuity, to Mrs. Lizzie Hall, Peabody, for Painted Salad Set.

1.00. Gratuity, to Miss Mary Tigh, Peabody, for Decorated China.

1.75. Gratuity, to Mrs. G. C. Messer, Peabody, for Decorated China.

1.00. Gratuity, to Miss Mary W. Weston, Middleton, for Decorated Table.

2.00. Gratuity, to Mrs. L. H. Richardson, Peabody, for Decorated Jars.

1.00. Gratuity, to Mrs. J. A. Cain, Lynn, for Photographs.

2.00. Gratuity, to Miss C. F. Lucas, Salem, for Photographs.

2.00. Gratuity, to Mrs. Edward C. Cook, Danvers, for Jar.

1.00. Gratuity, to M. H. Cole, Boxford, for Flowers.

Mrs. W. H. Kinsman, Miss Lizzie B. Hathaway, Mrs. Belle Hodgkins—*Committee.*

WORK BY CHILDREN UNDER TWELVE YEARS OF AGE.

.50. Gratuity, to Eva M. Adams, Newbury, for Scarf.

.75. Gratuity, to Hattie E. Perkins, Peabody, for Handkerchief.

.50. Gratuity, to Master John Mars, Peabody, for Apron.

.50. Gratuity, to Winnifred P. Upton, Peabody, for Blouse and Jacket.

$1.00. Gratuity, to Mary T. Reynolds, Peabody, for Suit of Clothes.

.50. Gratuity, to Blanch Bradford, Peabody, for Tray Cloth.

.50. Gratuity, to May Goodridge, Peabody, for Pillow Case.

.50. Gratuity, to Lucy R. Moore, Peabody, for Pillow Case.

.50. Gratuity, to Maggie Montgomery, Peabody, for Skirts and Fringe.

$1.00. Gratuity, to Annie W. Parmenter, Peabody, for Dress.

.50. Gratuity, to Lucy K. Moore, Peabody, for Darning.

Mrs. S. B. George, Edith Gardner Cressey—*Committee.*

REPORT OF COMMITTEE ON ROOT CROPS.

The Committee on Root Crops have attended to their duty and report as follows:

We have six entries of Root Crops. All or a part of the Committee have visited them, noted the crops and conditions under which they have been grown.

We find the Essex farmers alive to the great competition in agricultural products, and best methods of keeping up the fertility of their farms.

Our first meeting was with Mr. John H. George, of Methuen, August 28th, to view a crop of onions and potatoes. His crops are grown with an eye to business, as statement will show below.

Our second meeting was Nov. 10th, at Frederick Stultz's, of West Newbury, to view a crop of Mangold Wurtzels. This farm shows thrift and good management.

Our third visit was at the farm of Kent & Marsh, market and floral gardeners of Newburyport, hot house vegetables and flowers a specialty. Their entry was a crop of onions and their statements are worthy of more than passing notice. Had their rows of onions been sown as near as Mr. George's it would have been a warm competition.

Oct. 16th, we visited the farm of James Manning, of Topsfield, and was shown a fine crop of ruta baga turnips. Mr. Manning although quite an old man has not lost his grip on good farming. Sets a high standard on education and moral character as requisite of good farming.

On Oct. 16th, we visited the farm of Charles C. Blunt, at Andover. We were shown a fine field of carrots. Mr. Blunt's farming needs no commenting on, as premiums from the Essex Agricultural Society of previous years will show. The Committee recommend the following awards:

ONIONS.

To John H. George of Methuen, first premium, $8.00
To Kent & Marsh of Newburyport, second premium, 5.00

CARROTS.

To Charles C. Blunt of Andover, first premium, 8.00

MANGOLD WURTZELS.

To Frederick Stultz of West Newbury, first premium, 8.00

POTATOES.

To John H. George of Methuen, first premium, 8.00

TURNIPS.

To James Manning of Topsfield, first premium, 8.00

The Committee wish herewith to acknowledge the hospitality with which they were received.

CHARLES W. NELSON,
JOHN BARKER,
RICHARD WEBSTER,
WILLIAM PHILLIPS, JR.,
JOHN W. DENNIS,
} Committee.

STATEMENT CONCERNING A CROP OF ONIONS RAISED BY JOHN H. GEORGE, METHUEN, MASS., IN 1895.

The crop of '94 was onions. The crop was fertilized with five cords of coarse manure to the acre, applied in the fall, and one-half ton of Stockbridge onion fertilizer, applied in the spring. To the crop of '95 was applied one-half ton of Stockbridge onion fertilizer, The land is a peat meadow. It was ploughed in the fall, and in the spring it was harrowed with a tooth harrow and brushed with a birch-brush harrow: one-half ton Stockbridge onion fertilizer was applied broadcast; brushed again, sowed with three lbs. of Yellow Globe Danvers onion seed and one-fourth lb. of Southport White Globe seed (from Jas. J. H. Gregory, seedsman, Marblehead, Mass.); bed rolled with a wooden roller, rows ten inches apart; they were hoed five times, weeded four times; cut up when ripe with a circular wheel hoe; gathered in 1½ bushel crates and stored in the onion house. By the help of ten boys and two men the half acre was gathered and housed in four hours. The yield was 481½ bushels, on the half acre, of the handsomest onions I ever saw; and while many are now selling their onions for as low as 25c per bushel (as a paper before me says), I have sold over 300 bushels at an average of over 75c per bushel.

The account stands as follows:

Dr.

Ploughing ½ acre,	$1 50
Harrowing, applying fertilizer and brushing,	1 50
One-half ton Stockbridge onion fertilizer,	20 00
Sowing and rolling,	1 00
Hoeing five times,	4 50
Weeding (boy's work at 75c per day), 10 day's work,	7 50
Seed,	8 00
Harvesting and topping,	15 00
Marketing,	10 00
Interest and taxes on land,	5 00
	$74 00

Cr.

By 481½ bushels onions at 75c.,	$361 13
Profit on one-half acre,	$287 13
" " one acre,	$574 26

Not a very bad showing for Stockbridge onion fertilizer and elbow grease.

Respectfully submitted,

JOHN H. GEORGE.

METHUEN, MASS., Sept. 30, 1895.

This may certify that I measured the piece of ground on which grew the crop of onions entered for the Essex County Agricultural Society premium, and it contains one half acre.

WALTER SMITH.

STATEMENT CONCERNING A CROP OF POTATOES RAISED BY JOHN H. GEORGE, METHUEN, MASS., 1895.

The crop of '94 was a crop of oats cut for fodder, July 10th, ploughed and sowed to barley which was cut for fod-

der well in the milk on Oct. 15th. The previous crop for 1893 was corn manured in the hill with night soil mixed with gravel and loam, all the manure which the crops had. The land was ploughed in the Fall of '94; in the Spring of 1895 it was harrowed and brushed. On one side of the piece there were three cords of as good manure as could be had, applied at the rate of 20 cords to the acre; on the remaining part was applied Stockbridge Potato Fertilizer at the rate of one ton per acre, part broadcast, and the rest in the drill. The piece was furrowed, potatoes dropped, covered with cultivator, brushed with brush harrow, as the potatoes were pricking the ground, cultivated once, earthed up with cultivator twice, dug with a potato digger and mostly stored in the cellar. I have sold 60 bushels at 60 cents per bushel; there was no hand work done on them from the dropping to the digging. The seed was three bushels Early Norther, five bushels New Queen and one-half bushel Rural Blush. The yield of the Blush, was first, Queen next, and Early Norther last. The tops during the season where the manure was applied looked the rankest, but at digging time the Stockbridge told the story, the yield on the fertilizer being at least one-third more than where the manure was used. There were not one-half as many rotten ones on the Stockbridge as on the manure, while the fertilizer potatoes were much smoother and of better quality.

I think I have fully satisfied myself that the Stockbridge Potato Fertilizer is the only manure which should be used for potatoes, if you want good, sound, smooth tubers. The yield was 159 bushels on the half acre, or 318 bushels per acre.

The account is as follows :

	Dr.	*Cr.*
To ploughing ½ acre,	$ 1.50	
To harrowing and brushing,	.50	
To opening drills and applying fertilizer,	1.25	
To 3 cords manure on ground,	18.00	
To ½ ton Stockbridge Potato Fertilizer,	20.00	
To cultivation,	2.00	
To digging and storing,	7.00	
To seed (from W. W. Rawson)	6.00	
To interest and taxes,	5.00	
	$61.25	
By 152 bushels potatoes at 60c.,		$91.20
By 7 bushels small ones, at 20c.		1.40
		$92.60

Profit on ½ acre, $31.35.
Profit on 1 acre, 62.70.

Respectfully submitted,
JOHN H. GEORGE.

METHUEN, MASS., Sept. 30, 1895.

This is to certify that I helped measure the land on which John H. George's potato crop grew, and it contains ½ acre.

LYMAN GEORGE.

STATEMENT CONCERNING A CROP OF CARROTS RAISED BY C. C. BLUNT, ANDOVER, MASS., IN 1895.

The land on which I raised the crop of carrots which I enter for premium is a light, deep loam. The crop of 1893 was peas, manured with phosphate, at the rate of 800 lbs. per acre, followed with a crop of barley. The crop of 1894 was carrots. 1500 lbs. of phosphate was used and a large crop raised.

This spring ploughed the ground and sowed ½ ton of phosphate on the half acre. Harrowed in and smoothed with a drag; seed sown on the 10th of June at the rate of 2½ lbs. per acre.

The dry weather affected the crop somewhat.

COST OF CROP.

Preparation of land,	$ 4.00
1000 lbs. phosphate,	16.00
Seed and sowing,	2.25
Hoeing, weeding and thinning,	17.00
Harvesting,	10.00
	$49.25

VALUE OF CROP.

By 314 bushels carrots, at 50c.,	$157.00
Cost,	49.25
	$107.76

Respectfully submitted,

C. C. Blunt.

Andover, Mass., Oct. 28, 1895.

I hereby certify that I have measured a field of carrots for C. C. Blunt, entered for premium, and find it contains one-half acre.

Having measured the crop on the above piece, the yield is 314 bushels, 55 pounds to the bushel.

Samuel Thayer.

STATEMENT CONCERNING A CROP OF ONIONS RAISED BY KENT & MARSH, OF NEWBURYPORT, MASS., 1895.

The crop of onions that we enter for premium is on land that has been to onions for the past six years. There has

not been but small difference in the crops for the past four years. This year we did not sow them only one foot apart and with three pounds seed, 2¾ Danvers Globe and ¼ Craker onion. The result was 422 bushels. The onion market being very dull we have not disposed of but a small part of the crop. Shall base the price on an offer received a short time since, 35 cents per bushel.

The statement is as follows :

Dr.

To 5 cords Manure at $6.00,	$30 00
" ploughing and harrowing,	5 00
" 3 pounds seed at $2.00,	6 00
" sowing,	75
" hoeing and weeding,	22 00
" harvesting,	8 00
" topping and marketing,	15 00
" use of land,	6 00
	$92 75

Cr.

By 422 bushel at 35c.,	$147 70
Net profit,	$54 95

Respectfully submitted,

KENT & MARSH.

NEWBURYPORT, MASS., Oct. 31, 1895.

This is to certify that I have measured onion ground containing one-half acre, for Messrs. Kent & Marsh.

Respectfully submitted,

C. W. NELSON.

STATEMENT OF A CROP OF MANGOLD WURTZELS, RAISED BY FRED STULTZ, WEST NEWBURY.

The piece of Mangold Wurtzels which I enter for premium contains one-half acre, with land of sandy loam.

In 1893 it was in potatoes with a light dressing of manure.

In 1894 the crop was Mangold Wurtzels with five cords of manure.

In 1895 five cords of manure was spread broadcast, ploughed in about four inches deep, and harrowed.

Ploughed again eight inches deep, harrowed and leveled. Sowed the seed in drills, twenty-eight inches apart, with an onion seed sower. I used two pounds of seed, Giant Ovoid, Intermediate Yellow, Norbiton Giant, in equal parts. I prefer the Intermediate Yellow as smoother, and easier cleaned. The entire crop was reduced this year by the dry weather of September.

COST OF CROP.

Dr.

Manure, 5 cords,	$25 00
Ploughing,	1 50
Harrowing and leveling,	50
2 lbs. seed,	80
Sowing,	50
Wheel hoeing (once),	50
Thinning, weeding and resetting,	3 00
Cultivating (three times),	1 50
Harvesting,	5 00
	$38 30

Cr.

Tops,	$2 50
450 bush., at 15c.,	67 50
	$70 00
Yield per acre, 900 bush., at 15c.,	135 00
" tops, per acre,	5 00
	$140 00
Cost per acre,	76 60
Profit per acre,	63 40

Respectfully submitted,

FRED STULTZ.

This certifies that I have measured the piece of land on which Fred Stultz raised 450 bush. Mangold Wurtzels, and it contains one-half acre.

JAMES STULTZ.

STATEMENT OF A CROP OF TURNIPS RAISED BY JAS. MANNING OF TOPSFIELD.

The half acre of land on which the turnips I enter for premium were grown, was planted last year with hungarian. I put three cords stable manure on the half acre, in drills three feet apart. The seed was sown July 22nd, yellow purple top ruta baga. I harvested four hundred five bushels (405), the average price being forty-five cents per bushel. The statement is as follows:

To three cords stable manure,	$18 00
Seed,	50
Ploughing,	1 50
Sowing,	75
Thinning,	2 00
Harvesting,	5 00
Cultivating,	1 00
	$28 75
Cr.	
By 405 bushels turnips at 45c.,	$182 25
Less,	28 75
Profit per half acre,	$153 50

Respectfully submitted,

JAS. MANNING.

I hereby certify that I have measured a field of turnips entered for premium by James Manning, and find it contains one-half acre.

JOHN H. TOWNE.

TOPSFIELD, NOV. 2, 1895.

REPORT OF COMMITTEE ON SMALL FRUITS.

The Committee on Small Fruit Crops have attended to the duty assigned them, and respectfully submit the following report:

J. Webb Barton, of Danvers, entered a crop of strawberries.

Fred Stultz, of West Newbury, strawberries.

Oscar Gowen, of West Newbury, raspberries.

Amos Haseltine, of Haverhill, blackberries and currants.

June 7th notice was received by the committee of their election, and that Mr. Barton had entered a field of strawberries.

The notice was so short, and the season so busy, that none but the chairman could be induced to visit Mr. Barton's crop, thus foregoing the pleasure of examining an exceedingly fine plot for this season, of this most excellent of all small fruits. Our next call was on Mr. Stultz near Cherry Hill Nursery. His vines had a very strong growth, and were well loaded with fruit which gave promise of a large crop, but being late the berries were in their height when the heavy rains of the latter part of June caused large quantities to decay, very materially reducing the crop. Mr. Gowen's crop of raspberries was a good one, considering the small amount of labor expended. As he does not go back as does Mr. Haseltine, and charge the present crop with the expenses of former years, we infer that his account has already been balanced by preceding crops.

On July 25th three of the committee were at Ayers Village to view the blackberry and currant crops of Amos Haseltine, which were grown on the same land as were those which he received premiums for last year. Mr. Haseltine is somewhat disappointed with this year's crop, which leaves a small balance against him for the three years of bearing. We think that Mr. Haseltine's statements as a continuation of his last year's report are valuable to the

Society, and we would recommend that they be printed in the *Transactions*; but we believe it best to refer the award of premium for the crops entered by him to the Trustees.

After a careful examination of the several statements, your Committee recommend the following awards.

To J. Webb Barton, of Danvers, crop of strawberries, first premium,	$8.00
To Oscar Gowen, of West Newbury, crop of raspberries, first premium,	$8.00
To Amos Haseltine, Haverhill, for statements for experiments, for three years,	$5.00

B. F. Huntington, L. H. Bailey—*Committee.*

STATEMENT OF STRAWBERRY CROP ENTERED BY J. WEBB BARTON, DANVERS, MASS.

The land upon which this crop was raised, had been in grass for about ten years. The slope is such that after heavy rains and in the spring, water remained upon the surface and the grass along this lower part had given place to brakes and other weeds. This applies to only a portion, perhaps one fourth part.

I plowed it in the fall of 1893 and laid a 3 in. tile with one branch to prevent this surplus of water. It was fairly successful though I hoped for better results.

After a thorough harrowing in the spring, I applied broadcast 250 lbs. ground bone and 275 lbs. of chemicals, (home-mixed) and set out the plants, alternate rows of Beverly and Haverland, six feet distant from each other, and about two feet apart in the row.

Between the strawberry rows I planted a row of bush beans.

After the ground had frozen, a good covering of meadow hay was put on.

The first picking for market was June 18, and the last of 14 boxes, upon July 16th.

		Cr.
3162 boxes,		$428 21
	Dr.	
Preparing land,	$6 75	
Plants,	8 00	
Setting,	2 85	
Fertilizer,	9 00	
Cultivation and weeding,	36 90	
Hay,	4 00	
Labor on hay,	3 50	
Picking,	64 30	
Marketing,	63 24	
		$198 54
Net profit, 16,884 sq. ft.		$229 67
Rate per acre :		
8154 boxes,		$1104 25
Cost of production and selling,		512 21
Net profit,		$592 04

J. W. BARTON.

This certifies that I measured the strawberry bed entered by J. W. Barton and that it contains 16,884 sq. ft.

J. W. NICHOLS.

STATEMENT OF A CROP OF CUTHBERT RED RASPBERRIES ENTERED BY O. GOWEN.

The raspberry crop entered by me grew on bushes which had been started three years ago. There had not been any dressing put on these since they were set out, except I have yarded my hens among them. The only labor expended on them this year has been cutting out the old cane and cutting back the new ones. The yield was 1775 pint baskets which sold for $159.75.

To 2 days labor at $1.50,	$3 00
" Picking 1775 baskets berries at .01,	17 75
" Marketing 1775 " " at .01¼,	22 19
	42.94

Cr.

By 1775 baskets berries,	$159 75
Expenses,	42 94
Net profit,	$116 81
Net profit per acre,	$757 60
Gross receipts,	$1032 40

Respectfully submitted,

O. Gowen.

West Newbury, Sept. 2, 1895.

I certify that I measured the land on which the crop of red raspberries grew entered by Oscar Gowen for premium offered by the Essex Agricultural Society, and said lot contained twenty-four and 48-100 rods.

Wm. Merrill.

STATEMENT OF BLACKBERRY CROP, 1895.

The blackberry crop I enter for premium was grown on the same piece of land as entered last year, and to avoid repetition I refer you to Essex County Transactions for the year 1894, page 112, for measure of land and former cultivation. Last fall the drouth was followed by heavy rains, which caused the canes to grow late, and the early cold weather in November froze them while full of sap, killing more than two-thirds of the canes. On my three other pieces of blackberries there was greater damage, two of them were almost all destroyed, making the total crop of the four pieces for this year, only 450 quarts,

while the crop of last year was 3200 quarts, nearly seven times as great.

I think that this late growth of the canes was partly caused by my applying fertilizer in the month of August, which I should not again do, but apply it in the spring.

Dr.

Balance of cost from 1894,	$12 00
Interest,	72
Use of land,	1 50
Pruning and wiring,	4 65
Hoeing and weeding,	2 00
Picking and selling 222 quarts, at 4 cents,	8 88
Total,	$29 75
Cr. by 222 quarts at 12½ cts.	27 75
Dr. to balance,	2 00
Dr. per acre,	14 40
Crop per acre, 1600 quarts.	
Value of crop per acre,	200 00

Respectfully submitted,

AMOS HASELTINE.

STATEMENT OF CURRANT CROP, 1895.

The currant crop entered for premium was raised on the same piece of land as entered last year, and for its measure and former cultivation I refer you to Essex County Transactions, for the year 1894, page 110. This year, as in last, the crop was greatly damaged by frost at the time of blossoming.

The only cultivation done this year was hoeing.

Currants Dr.	to balance of cost,	$34 00
	" Interest,	2 04
	" Use of land,	2 00
	" Hoeing 4 times,	6 00
	" Destroying currant worms,	4 61
	" Pruning,	1 00
	" Picking and selling 694 qts. at 3½,	24 29
	Total expense,	$73 94
Cr. by 694 qts., sold at 8 to 10 cents,		59 94
Currants Dr. to balance of expense,		14 00
Balance of expense per acre,		80 29
Crop per acre, 3980 qts.		
Value of crop per acre,		$343 74

Respectfully submitted,

AMOS HASELTINE.

GRAIN CROPS.

The Committee on Grain Crops have attended to their duties and present the following report: The number of fields entered for premiums were ten, viz., one of rye, by Mr. James J. H. Gregory of Marblehead, one of oats by Messrs. C. K. Ordway & Son, of West Newbury, one of buckwheat, by Mr. Stephen A. Jacques of West Newbury, and seven entries of corn, viz., Mr. C. W. Nelson, Newburyport, Mr. John C. Tarleton, West Newbury, Mr. Nathan Longfellow, Groveland, Mr. Marcus Holt, Andover, Mr. H. M. Killam, West Boxford, Messrs. C. K. Ordway & Son, West Newbury, and Mr. Stephen A. Jacques, West Newbury.

The committee would recommend the following awards:

To James J. H. Gregory of Marblehead, crop of rye, first premium,	$7 00

To C. K. Ordway & Son of West Newbury, crop of oats, first premium,	7 00
To C. W. Nelson of Newburyport, crop of corn, first premium,	7 00
To John C. Tarleton of West Newbury, crop of corn, second premium,	4 00

As will be seen by the statements submitted the yield of corn on the various fields visited by your committee was unusually large,—it being seldom that a piece of ground produces one hundred and twenty-eight bushels of shelled corn per acre, as did that entered by Mr. C. W. Nelson of Newburyport. The variety which he planted was the result of a cross made by himself, between an early and a late kind, and which he has developed to a remarkable degree of perfection. The ears were very large, the kernels of unusual size, very regularly arranged and presented a handsome appearance. The stalks were not as large as in some fields which were visited,—the ears being produced nearer the ground.

Very nearly approaching the field of Mr. Nelson, was that of Mr. John C. Tarleton of West Newbury, which yielded one hundred and twenty-two bushels of corn per acre. One thing which we particularly noticed, was the unusual height of the stalks, some of the ears being six and one half feet from the ground, thus producing a large crop of fodder in addition to the grain.

The field of corn entered by Mr. Nathan Longfellow of Groveland is deserving of mention as being in many respects in close competition with those already mentioned. Had his corn been grown in hills as near together as were Mr. Tarleton's, it is probable that the yield would have been as large.

In all three cases above described the natural condition of the soil was considerably better than the average farming land in Essex County.

The field of corn entered by Mr. Marcus Holt, of Andover, presented a fine appearance, some of the ears exceeding fourteen inches in length. As Mr. Holt has not sent in a statement, the actual yield is not known to the committee.

In an ordinary year, the crop of corn entered by Mr. H. M. Killam of West Boxford, would be considered of special merit. The ears were of good size and well ripened at the time of our visit. The variety was the "Angel of Midnight."

The crop of corn entered by Messrs. C. K. Ordway & Son, of West Newbury, was grown on land of a gravelly nature, much like that of Mr. Killam. The corn was of good quality and well eared, but there were some missing hills caused by the depredations of the birds in the spring. The variety was Ordway's Improved.

Mr. Stephen A. Jacques of West Newbury, entered a field of corn which he had planted late and fertilized with hen manure. The piece looked well when visited by the committee but as Mr. Jacques has not sent in a statement the committee are unable to report fully upon it. The crops were nearly all visited by the larger part of the committee. We desire to express our thanks for the kindness and courtesy which were extended to us.

Respectfully submitted,

FREDERICK A. RUSSELL, *for the Committee.*

STATEMENT OF J. J. H. GREGORY, CROP OF RYE.

The piece of rye entered for premium, was on land on which onion seed had been raised the three previous seasons. It had been liberally manured these seasons, receiving on an average 8 cords of stable manure, and 500 lbs. of fertilizer per acre, which contained about 6 per cent. nitrogen, 6 per cent. phos. acid and 10 per cent. potash. It

was planted early in September of 1894, two bushels of seed being sown broad-cast to the acre. The soil was well worked with wheel and acme harrow, until there was a good seed bed. The crop lodged more or less, making it necessary to cut part of it with a scythe. Owing to the lodging all the straw was not cut close to the ground. Though one bushel to the acre is the rule when rye is planted for grain, and two when planted to raise green fodder or hay, yet in a practice extending over several years, I find that when the land is rich in plant food, two bushels is not too heavy seeding for grain, provided grass seed is not sown with it, in which case it would be likely to smother it. True, where so heavily seeded, it will at times, lodge more or less, but not to the injury of the grain to any marked degree, while by using the scythe on the lodged portion, nearly all the straw can be secured and in the hands of a skillful mower be so landed as to admit of being made into bundles as readily as though cradled. The debit and credit of the crop is about as follows:

Dr.

Plowing and harrowing of an acre,	$4 00
Seed (two bushels) and sowing,	2 50
Acme harrowing in of seed,	1 00
Cradling and mowing,	1 50
Bundling,	2 00
Hauling and threshing by horse power,	6 25
Winnowing,	2 00
Baling and marketing of straw,	8 50
Value of potash taken by straw and grain,	2 34
" " phos. acid taken by straw and grain,	3 12
Interest on land,	4 50
As the nitrogen would otherwise waste it is not charged ($18.42) against the crop,	
Total Dr.	$37 71

Cr.

41 7-9 bushels grain,	$41 77
3936 lbs straw, at $15,	29 52
	$71 29
	37 71
Profit,	$33 58

J. J. H. GREGORY.

I hereby certify that the land on which the crop of rye for premiums was raised, was measured by me, and contained 49,200 square feet; that the grain from it by the standard of weight required by the rules of the Essex Agricultural Society was 47 bushels, and the straw weighed 4405 lbs. which would be at the rate of 41 7-9 bushels of rye and 3936 lbs. of straw per acre.

Aug. 15, 1895. EDGAR GREGORY.

STATEMENT OF C. K. ORDWAY & SON, CROP OF OATS.

1893. This piece of land was in grass.

1894. It was plowed ten inches deep with three horses, harrowed six cords of barnyard manure to the acre, spread broadcast, harrowed and planted with corn.

1895. The corn hills were split with a Randall harrow, plowed seven inches deep, harrowed and sowed to oats, three bushels to the acre, without manure or fertilizer of any kind.

Seed White Dutch Oats of my own raising.

The soil sandy loam.

COST OF CROP.

To plowing and harrowing,	$3 00
Sowing, harrowing and smoothing,	3 00
Seed oats,	1 50
Cutting with machine,	5 00
Drawing and storing,	1 00
Threshing and winnowing,	4 50
	$18 00

Cr.

By 56 bushels of oats,	$28 00
" straw 1 ton,	8 00
	$36 00
Profit,	$18 00

56 bushels to the acre,

Respectfully submitted,

C. K. Ordway & Son.

STATEMENT OF CORN CROP RAISED AT CITY FARM, NEWBURYPORT. ENTERED BY CHARLES W. NELSON.

The land was run-out field land. Ploughed in October, 1894, without manure. Six cords stable or horse manure to the acre spread on and harrowed in April, 1895.

Marked three feet, ten inches each way, furrowed four inches deep. 500 lbs. Bowker's Fertilizer put in the hill. Planted May 19th, with "Nelson's Prolific Corn." Hoed twice, cultivated three times. Cut and stooked Sept. 15-18th. Husked October 20 to 25th. The amount on the acre was 9216 lbs. corn on the ear; 128 bushels of 72 lbs. to the bushel. The corn shells 56 lbs. of corn from 72 lbs. of ears at time of husking.

COST OF CROP.

Ploughing,	$3 00
Harrowing,	3 00
Planting and seed,	4 00
Hoeing,	3 00
Cutting and shocking	4 00
Husking and teaming,	6 00
Value of manure,	36 00
Fertilizer,	9 00
	$68 00

VALUE OF CROP.

3 tons stover,	$21 00
Value of corn,	57 00
Manure in ground,	20 00
	$98 00

The above statement is correct.

Respectfully submitted,

C. W. Nelson.

Newburyport, Mass., Sept., 1895.

This is to certify that I have measured the land for C. W. Nelson, on which the corn grew that he entered for premium. It contains one acre.

O. L. Kent.

This is to certify that I have weighed the crop of corn raised by C. W. Nelson, and find it to contain 128 bushels of 72 lbs. to the bushel.

Geo. O. Kent.

STATEMENT OF CROP OF CORN RAISED BY JOHN C. TARLETON, WEST NEWBURY, MASS.

The piece of corn I enter for premium, contains one acre and sixty-two rods.

The crop of 1894 was grass. Yield about one ton to the acre. It had not been manured for 20 years. Clay soil. It was ploughed about the 10th of May, and a coat of six cords of manure to the acre was ploughed in and well harrowed.

It was planted the 23rd day of May with ten quarts of corn to the acre, of my own raising, of the Longfellow variety. The hills were 3 feet apart one way and 3½ the other, five kernels of corn to each hill, 400 lbs. of Bradley's X. L. Superphosphate to the acre, was used in the hills. It was cultivated three times one way with

horse, and hoed twice by hand. It was gathered and husked Oct. 10th to 20th, and the amount of corn was 11,844 lbs. or 8536 lbs. to acre. 122 bushels shelled corn to acre.

Estimated cost per acre :

Ploughing,	$2 00
Harrowing and furrowing,	3 00
Planting and seed,	3 00
Cultivating and hoeing,	4 50
Gathering and husking,	12 00
Manure,	45 00
Value of fertilizer,	5 00
	$74 50

The above statement is respectfully submitted,

JOHN C. TARLETON.

WEST NEWBURY, Oct. 1, 1895.

I hereby certify that I measured the land on which the corn grew which John C. Tarleton has entered for a premium and it contained one acre and sixty-two rods.

WM. MERRILL.

REPORT OF DELEGATE FROM THE STATE BOARD OF AGRICULTURE.

The Essex County Agricultural Society held its show this year in the City of Haverhill, Sept. 18th, 19th and 20th. This Society has had no grounds of its own for exhibition purposes, but has held its shows at different points in the county as circumstances seemed favorable. This society has an endowment fund which together with what it receives from the state has enabled it to pay fairly good premiums for many years. But for the last few years it has been becoming more and more apparent that the Society must either largely reduce its premiums, or its endow

ment fund would soon be exhausted. After careful deliberation it was decided at the last annual meeting of the society to locate in some favorable place, and procure grounds and erect suitable buildings, etc.

I believe this to be a step in the right direction, for this society has been holding its fairs at a great disadvantage for some years past. Many of these disadvantages were very apparent at the last fair. The grounds used for the exhibition of live stock, farm implements, etc., were out some two miles from the city, made accessible by an elec tric road. The grounds were not fenced, and of course no admittance fee was charged. The show of Cattle was very slim, as they were required to be kept on the grounds during the fair, and no protection from the storms provided. The best cattle were kept at home. There was a large entry of horses and colts, for which shed stalls were provided. If the grounds had afforded a suitable place for them to have been shown it would have added greatly to the interest of the fair. There was a goodly number of sheep and quite a large number of swine. The poultry occupied a tent and was a first class show. A large tent protected a fine exhibit of farm implements, etc.

Working horses, and oxen, were tested the second day of the fair on one of the streets near the fair ground. They were shown on a loaded wagon which they moved up and down a not very steep grade. No cruelty was shown. A very interesting feature of the last day, was the plowing match. Some excellent work was done.

The show in the City Hall was something to be proud of. Every available space was filled and many exhibits were packed away and could not be shown for want of space. The fruit exhibit was not only large but of excellent quality. The hall was crowded with visitors who were unanimous in their verdict that it was the best display ever made by this society. Grains, seeds and vegetables were shown in a tent just outside the hall. I found it

filled to overflowing. Many of the exhibits would have been hard to match anywhere.

The annual address was delivered by Hon. W. S. Knox, in the Centre Church. Subject:—A Diversified Industry most favorable to Freedom and Progress. Following the address, was the annual banquet served in Tanner's hall, and as the proof of the pudding is the eating thereof, we pronounced it a success. After the banquet some good singing and speech making was in order.

In closing I would say that this Society is doing much good work in offering liberal premiums for farm improvements, field crops, etc., etc.

Respectfully submitted,

G. C. Rowley.

FARMERS' INSTITUTES.

The Society held three Institutes the past year on as many different days, forenoon and afternoon, at which the following subjects were offered by carefully prepared essays and discussed by any and all present.

The first meeting was at Topsfield, Friday, January 25, 1895. Subject for the forenoon, "Fruit growing and small fruits; and how spraying increases the profits." Afternoon subject, "Flowers and the flower garden." Prof. S. T. Maynard of the Massachusetts Agricultural College spoke on both the above subjects. Followed by Francis H. Appleton on the subject "Agriculture and Trade."

The second institute was held at Parker Hall, Newbury, Friday, February 15th, subject both forenoon and afternoon, "Tuberculosis" by Hon. William R. Sessions, Secretary of the State Board of Agriculture.

The third institute was held at Beverly, Friday, March 8th, the subject for forenoon and afternoon was, "Cattle and cattle feeds" by Prof. William E. Brooks, Agricultur-

ist, at the State Agricultural College. There was a good attendance at all the meetings, the subjects were interesting and those present entered into the discussion quite freely and drew out facts from the essayist and others that were of value to all interested in the different subjects.

REPORT OF DELEGATES TO OTHER SOCIETIES.

By invitation the exhibitions of the Houghton Horticultural Society at Lynn and of the Amesbury and Salisbury Society held at Amesbury, beginning Sept. 24th, were visited by some of your delegates.

That at Amesbury was a complete success in every respect. Each department was well represented, by the choicest products of the flower garden, vegetable garden and field culture, the orchard in products of apples, pears and other fruits, notable works of art, and woman's handiwork, in fine needle work, rugs, mats, quilts, and also specimens of bread, cake, preserves, etc., filling to overflow the hall, and an annexed tent. The building for the exhibition of cattle, horses, sheep, swine, and poultry, was also filled with first class animals in each department. An important and popular feature of the Amesbury and Salisbury Society Cattle Show, is the grand parade about the town, which is led by mounted marshals, a band of music, followed by carriages for officials and invited guests, then an ox-team of some 20 yoke of noble oxen (such as would be difficult to get together in any other section of the county), drawing an immense, highly decorated wagon, loaded with the beautiful young ladies, gayly dressed, of the Society then follow business floats, with various devices advertising their calling. This parade attracts everybody in town, and their friends from out of town, to the streets, on the line of march.

The dinner served in the upper story of the exhibition building, by the ladies of the Society, is another attractive

feature of this Cattle Fair, as it is made a very social gathering of friends. It may well be said that the conduct of this Society's annual exhibitions is successful, by remaining true to the legitimate object of an Agricultural Fair. It offers an object lesson for careful study of all the best products of the farmer's efforts, it affords an opportunity for free social enjoyment, it interests the whole people, and its success refutes completely that common expression, that cattle shows must have outside attractions, such as can better be seen at a dime museum, all sorts of games of chance in order to encourage our boys and young men to gamble, various monstrosities, and other exhibitions of doubtful moral influence. What a disgraceful commentary this is, upon the intelligence and morality of the farmers and others of Massachusetts.

The Houghton Horticultural Society, at Lynn, has heretofore confined its annual exhibitions to fruits and flowers. This year it extended its scope by adding woman's work, such as fancy needle work, and domestic manufactures. Its show of fruits and flowers this year was hardly excelled anywhere, except by that of the Massachusetts Horticultural Society, at Boston. That this Society has exerted a great influence in its special line cannot be doubted, for the city of Lynn is a perfect bower of foliage and flowers during the season, and we know full well that a large portion of our first premiums on fruit go to Lynn.

And furthermore unquestionably the existence of Lynn Public Park, is one of the results of the influence of the Houghton Horticultural Society. This park contains over 1000 acres of land, closely adjoining the city proper, it is covered with a natural growth of trees of all varieties indigenous to our locality. A large artificial pond of many acres has been formed by the construction of dams, which affords a water supply for the city. Many miles of excellent roads have been built through valleys and over high

hills, which are interspersed with huge boulders. This park is approached by electric cars from two sides, affording a most delightful retreat for the public and of easy access. A good parent is and ought to be proud of the success of its children, without jealousies or heart-burning, so, we the Essex Agricultural Society, feel rejoiced at the success and prosperity of our children, and bid them God speed.

BENJAMIN P. WARE, delegate.

REPORT OF COMMITTEE ON FARMS.

The only entry for the premium on farms was made by Mr. Oliver Roberts of Danvers. His statement of the improvements and crops of the farm is attached as a part of this report. And from careful observation and investigation made by the committee at visits made in June and October, we feel sure that his statements are not overdrawn. Mr. Roberts with his two sons, have given evidence of their persistent energy and industry, and have shown what may be done on an ordinary small farm of forty acres, with no unusual natural advantages, and the larger half of what had been considered waste land, thirteen acres of which was low, wet land yielding only coarse meadow grass of little or no value, and ten acres of old pasture mainly covered with rocks, bushes and some trees, and the balance of eighteen acres of old, worn out tillage land, that had been skinned and starved immemorially, by short tenantcies, and in return had starved out the tenants, as they deserved, so that it had become a by-word in the neighborhood, that poverty and starvation was the inevitable fate of all tenants who had ever occupied the farm. And it was confidently predicted by all of the neighbors that that would be the result of Mr. Roberts' purchase of it.

Mark the change. The pasture land has been cleared

of the rocks, bushes and trees, and made into a garden of fine tilth, annually producing large crops of superior vegetables, that have gained a reputation in the market. The meadow land has been drained and nearly all brought into a very productive condition of cultivation yielding the largest crop of either grass or vegetables, while the old field of tillage land of eighteen acres has been changed from an almost barren condition to one of fertility and profitable production. The old buildings have been thoroughly repaired and nicely painted, a new house built for the family of one of his sons, a first class cellar built under the whole of one of the barns, for storing onions and other vegetables.

These improvements have been made and the two families supported, with a bank account showing a liberal balance on the Cr. side from the products of this forty-acre farm. Mr. Roberts believes in a liberal application of manure, and he applies it; he believes in the use of commercial fertilizers as a supplement, and he uses them; he believes firmly in clean culture, and he so cultivates; he believes in the economy and necessity of first class improved farm implements for saving labor, and he has them, also some original ones of his own make, that are not in the market. His horses and market wagons are of the best quality and adaptability for the work required.

Mr. Roberts' farm experience affords an excellent example of what may be accomplished on our New England farms and even small ones, by the exercise of good judgment, good habits, industry and perseverance, for certainly he started under the most forbidding conditions of the land, and no unusual natural advantages, he had only sufficient capital for the purchase of the farm, all else has come from the farm products. We heartily award him the premium of $20.00.

Respectfully submitted,

BENJAMIN P. WARE,
ASA T. NEWHALL,
JOHN M. DANFORTH,
Committee.

STATEMENT OF OLIVER ROBERTS, OF DANVERS.

To the Committee on Farms: —

Gentlemen, I herewith submit the following statement: The farm which I enter for premium, of Essex Agricultural Society, was purchased by me in April, 1878. It was then in a run-down, worn-out condition, containing forty-one acres, having been occupied by no one as tenant or owner for more than seven years at a time, for at least thirty years previous. The buildings were badly out of repair, and the general aspect of the place presented a discouraging prospect. The farm was divided about as follows on the "*Town Valuation Books.*" Tillage, 18 acres; pasture, 10 acres; meadow, 13 acres. The pasture, with the growth of wood on it, covering about three acres, has been cleared of rocks, stumps and roots, and is used, a large part of it, in growing onions and other crops, the balance being in grass. The meadow, which had never been ploughed before, and on which nothing but wild grass grew, has the most of it been ploughed, and is now bearing a good crop of English hay. We have some two acres of cabbages on part of it this year. The buildings have been repaired and some additions made, including cellar under barn, 40 x 60 feet, the whole now presenting quite a respectable appearance. The crops we grow mostly are potatoes, onions, carrots, cabbage, beets, parsnips, tomatoes, dandelions, etc. We grew this year, as near as I can estimate, 3,500 bushels of onions, 2,000 bushels of potatoes, 25 tons carrots, 300 bushels of beets, 500 bushels of tomatoes. We have about three acres of cabbage which are fair, although they have suffered from blight considerably. Our potatoes, some of them, rotted badly, and we probably lost at least 500 bushels by it.

We cut from twenty to twenty-five tons of hay. For stock we have five horses and two cows on farm. We use from 150 to 200 cords of manure, besides what we make

on the farm, and buy from four to six tons of fertilizer, and some years we buy a car of ashes from Canada.

As to the profits in farming I will say that we have got a living so far, and in some years have been able to save something, but since the change was made in 1892 in the financial condition and prospects of the country, the result has not been very flattering, I think, to the farmers, any more than to any other class.

Respectfully submitted,

OLIVER ROBERTS.

REPORT OF COMMITTEE ON FOREST TREES.

Mr. P. A. True, of Salisbury, entered for premium his row of fifteen Rock Maple trees. These trees were transplanted from a natural swamp growth fifteen years ago, and set fifteen feet apart beginning at the highway, and on a line back into his field by his house, and bordering on a well kept lawn in front of the house, making a good windbreak, and highly ornamental from the highway and his grounds. They have made a good growth and are in a healthy condition. Measuring about eight inches in diameter and 30 feet high, their branches meet between the trees, making a dense shade, while at this stage of their growth they appear to good advantage at the distance of fifteen feet apart, but very much too near together for future development.

Your committee are of the opinion that for ornamental purposes, either on the highway or on private grounds such trees as maples, elms, and other large growing trees should be at least fifty feet apart, in order to give room to develop in their natural proportions, especially on highways too close planting is objectionable, as they keep the roadway wet and heavy. The committee were highly pleased

with Mr. True's plantation of ornamental trees, his well-kept lawn about his spacious nicely painted house and farm buildings, by the whole of which they were favorably impressed with the general appearance of thrift and comfort, that prevailed in a marked degree, in this Essex County farmer's home.

The committee award him the premium of $8.00.

Respectfully submitted,

BENJAMIN P. WARE,
C. C. BLUNT, } *Committee.*

REPORT OF THE COMMITTEE ON ESSAYS AND FARM ACCOUNTS.

The Committee received this year three essays for consideration. The premiums offered by the Trustees admit of awards to two only, which they have made as follows:

To Mr. Sumner Perkins, of Danvers, for essay on "Culture of the Plum," $10

To J. W. Goodell, M. D., of Lynn, for essay on "The Cow, its Uses and Abuses," $8

To George A. Rogers, of the Cochichewick farm, North Andover, for actual accounts of crops of squashes and potatoes raised in 1894, $8

Respectfully,

G. L. STREETER, Chairman.

Committee :—G. L. Streeter, Salem; D. E. Safford, Hamilton; N. M. Hawkes, Lynn; G. B. Blodgett, Rowley; J. M. Danforth, Lynnfield.

PLUM CULTURE.

The culture of the plum is both pleasant and profitable, for it is a most delicious fruit and meets with ready sale

at good prices. It is far from the easiest fruit to grow to perfection, as it is subject to evils which often prove very serious. While the pear does well with the most indifferent cultivation, the plum must receive careful attention at critical periods, in order to prove satisfactory. There is some compensation for this difference however, in the relative values of the two fruits, for whereas it is frequently hard to dispose of pears at fifty cents per bushel, good plums are worth two to three dollars a bushel.

SOIL.

One of the first matters to be considered in connection with plum culture is that of soil. Good results may be expected upon any good, rich loam, that has been well-cultivated; but this fruit prefers rather heavy ground, that is moist and bordering on a clay. Of course it is understood the soil devoted to orcharding should in all cases have good drainage, either natural or artificial, since no tree will do its best with its feet (roots) perpetually wet. The piece of land, which is to produce plums had best be cultivated thoroughly in hoed crops, like corn and potatoes, for at least a couple of years previous to setting the young trees. By following this method the soil becomes mellow by frequent tillage, and rich through several applications of manure or fertilizer. It should be plowed finally to a good depth just before setting the trees.

VARIETIES AND TIME OF PLANTING.

We have the European and Japanese varieties of plums. The latter have been planted in this section of country only a few years. However they appear to be most promising, since they are of extra vigorous growth, enormous yielders of fine fruit, and comparatively little troubled by the curculio. Six Japanese trees (Abundance) we planted last fall, have all made a fine growth for one season, many shoots

being fully four or five feet long. Of the European varieties the Lombard has been most generally planted in this county. It is a heavy yielder, but the fruit is not first-class in quality. A list of the best European plums should include Reine Claud, Lombard, Bradshaw, Imperial Gage, Coe's Golden Drop, and German Prune. Abundance, Burbank, Satsuma and Ogon are four standard Japanese kinds.

Early autumn is the very best time to set plum trees, from the last of September to the middle of October. There are several considerations why the autumn is better than spring for planting hardy fruit trees in localities of moderate exposure. The soil in the fall is mellow, not wet, and hence easily worked. It is also warm, so as to encourage the formation of new roots, soon after the young tree is set. This is a decided advantage, for the tree has a hold upon the soil, and is ready for growth at the first approach of spring. Furthermore in the fall, the nurserymen have full stocks on hand, from which selections may be made ; and they are usually ready to quote lower prices than they could be prevailed upon to make in the spring.

SETTING THE TREE.

There was a good deal of wisdom expressed in the advice once given, to put a fifty cent tree into a dollar hole.

The moral is to spare no pains in preparing the hole.

Dig it broad and deep. It should be broader than the full span of the roots and deeper than the tree is to set. Loosen the subsoil but do not bring much of it to the surface. After trimming the tree (that is, cutting off smoothly any broken roots and heading in the shoots by removing from one-third to one-half of their entire lengths, to restore the equilibrium between top and roots), place a few inches of rich black soil in the bottom of the hole, so as to bring the tree, when placed in position, at about the same depth

in the ground as it originally stood in the nursery row. Then place the tree in the hole with roots carefully spread to cover as much soil as possible, and work the mellow soil down about all the roots so that the entire root system is closely packed with earth and no air spaces are left in the soil. Leave the soil a little higher around the tree than the general level of the surface so as to allow something for the settling of the loose earth. Finally, apply a good deep mulch of coarse manure, hay, or straw. This will keep the soil temperature about the roots more uniform and prevent repeated freezing and thawing of the ground in winter. However, if there is any danger of mice gnawing the bark, better leave no litter whatever near the tree to afford a lurking place for the pests, but heap up a smooth, hard mound of earth, allowing it to rise a foot or so in height and come to a point around the tree trunk, in shape like a cone.

TILLAGE AND FERTILIZATION.

The soil about plum trees should receive thorough cultivation every summer season. Weeds and grass growing rankly among fruit trees are obviously out of place. Neglected plum trees are especially afflicted with the disease of black wart. The plum, of all fruits, will not endure slipshod culture.

The trees need fertilization every year, preferably in the fall of the year; and unleached wood ashes and ground bone are among the best manures for this purpose. Mix these two ingredients in the proportion of one ton of ashes to five hundred pounds of bone, and apply a liberal dressing every year, and plums of the best quality should be obtained.

ENEMIES OF THE PLUM.

The greatest enemies of successful plum culture today are the black wart and the curculio.

The black wart is the term applied to the huge, unsightly excrescence, that is so familiar to all and is caused by the growth of a fungus that feeds upon the juices of the bark of the plum and wild cherry. As it spreads very rapidly, nothing is to be allowed near the plum orchard that will harbor it. Cut down all wild cherry trees and bushes, upon which it may be seen growing; and remove it as fast as it makes an appearance upon the plum tree. Cut it off of the limbs with a sharp knife, being careful to get it entire and then see to it that it is immediately burned. The wound is to be painted with a mixture of Venetian Red and kerosene oil prepared to about the same stiffness as ordinary paint. It is highly important to secure concerted action among all farmers and fruit growers to prevent the ravages of the black wart, for a single, careless grower may, by his neglect, seed an entire neighborhood to the pest.

The curculio, or "Little Turk," as it is popularly termed, is a small, black insect, which, as soon as the blossoms fall and the fruit begins to swell, makes a business of cutting a crescent shaped incision in each plum, into which an egg is inserted which duly hatches into a small worm, which by its growth sooner or later causes the fruit to fall prematurely to the ground. Spraying the trees with Paris Green (one pound to two hundred and fifty gallons of water), is a partial remedy; but far from wholly reliable, as it has been found that the curculio dies very slowly and will live to sting many fruits even after it has imbibed a sufficiency of poison to ultimately cause its death.

The surest remedy is to go around early every morning and jar each tree, after placing a sheet beneath the tree for the curculios to fall upon. They are then dropped into a pail of kerosene and subsequently burned. In the early morning the curculios are very sluggish and readily drop to the ground from the effects of a jar. The jarring

process needs usually to be continued for two weeks after the blossoms have fallen. Much has been said about the benefits of planting plum trees in poultry yards and runs. No doubt it is a favorable location, as the manure of the fowl is a valuable fertilizer and the birds will do something toward checking the curculio; but it will hardly be found prudent to depend upon the fowl to catch and devour all the curculio. The owner must do something toward it himself.

CONCLUSION.

There can be no question but that every small country place or large farm is improved in appearance and value by the planting and careful tending of a variety of fruit trees, among which the plum holds a front rank. The planting of large areas to plums as a commercial venture is of course another thing, and one that would hardly be practicable in the majority of circumstances. It is therefore in the former sense that we would call attention to plum culture and recommend the planting of this fruit tree to the end that farm life may be still more enjoyable and furnish additional luxuries.

THE COW: ITS USES AND ABUSES.

In past years, the horse has been considered the most valuable and necessary of man's animal servants. But since the advent of electricity, and all the varied uses to which it has been put, also the very general use of the bicycle for purposes of travel, whether for business or pleasure, the ordinary horse is fast falling to the rear, and the cow coming to the front, as the animal most necessary to the general wants of mankind, justly demanding his earnest attention and care. When we consider that *pure*, *honest milk* is one of the most perfect foods in exis-

tence, and all of its various products, so essential to the peace and harmony of every well regulated household, we must willingly grant to the cow her just and well earned position.

Breeds.—The Bovine race is divided into many different families, and is to be selected from, according to the different purposes for which they are desired, whether it be Beef, Milk, Butter or Cheese.

Probably nine-tenths of all cows in Essex County are kept for the sole purpose of raising milk, to be sold in the market as such. The pure breeds of fancy stock are too expensive for the ordinary farmer. Even we are told that an entire herd of Holsteins although great milkers, will not yield the necessary amount of solids, which the law requires, a mingling of other breeds being necessary to produce the lawful standard. Our dairymen have learned by experience that judicious crossing is the best method to produce the desired result.

The young farmer, not having the ready money to purchase, desires to raise up and enlarge his herd from year to year. The problem which confronts him is, what assurance has he that he can accomplish his object.

We are constrained to believe that there are certain laws of the animal kingdom which hold true, not only in the human, but among domestic animals as well, which is, that the general characteristics of feature, temperament, and complexion of the father, are to be found in the *female*, and of the mother in the *male* offspring. Working on these lines we should expect to accomplish the desired result.

Having a good healthy cow of extra milking qualities, we should seek a sire, whose dam was an extra good milker, and the chances are that the offspring would develop like qualities. Where both antecedents possess those qualities, the chances are so much the better.

Rearing.—Good healthy calves should never be allowed to stop growing. Should remain with the dam until all danger of inflammation of the bag is passed. Very soon after being taught to drink they will lap meal, such as ground oats and oil cake. With a little extra care and feed your yearling will be as large and fully developed as the ordinary two year old, and you have thereby saved whole year's keeping, and have a superior animal. Being used to being handled and petted will the more likely make gentle and tractable cows.

Usefulness. The ordinary heifer enters the dairy during her third year. Arrives at her best when six or seven, and declines more or less rapidly after eight years of age. Every cow should be allowed to go dry for two or more months, at each period of gestation, and have her grain ration materially lessened until near the period of parturition, when a little feed of roots with ground oats and oil meal will improve her appetite and general health.

Care.—In order to produce good, pure milk, the premises must be kept in a thoroughly sanitary condition, and the cows have in abundance all those elements, which not only go to give a bountiful supply of milk, but keep the cow in perfect health as well. In summer a full supply of fresh grass, supplemented by more or less grain while giving milk, and free access to fresh running water.

How seldom do we ever hear of any systematic attempt being made to improve the cow pasture, from which has been taken crop after crop without any return, even for centuries. Brush and briers cover the lowlands, and *white top* the sidehills. Building and keeping up fences around three or four times as much land as needed, if it were only kept cleaned up, and have an occasional dressing of *Phosphate, Plaster, Ground-bone and Wood-ashes* in part payment for the yearly robbery which has been going on these many years, unmolested. A few sheep with the cows

would be most useful in keeping down the brush, and would not materially lessen the cow's rations.

Housing.—Having a herd of good cows, and the pasture well put in order, let us turn our attention to the arrangements of the stable. If possible select a site gently sloping to the south or east, and at respectable distance from the house. Put in a good, high cellar with well cemented walls and bottom, for be it known that it is both thrift and economy for the farmer to save and utilize all of every kind of fertilizer produced on the farm; with a well cemented cellar, and an ample supply of asorbents, this object will best be attained.

The cellar is never to be used as a stable, and should be well ventilated up through the roof. Build upon this foundation a strong substantial building with not less than eighteen feet posts, let them be more rather than less, a few extra feet will give much extra capacity, and cost no more to keep covered, also will add to the general health and comfort of the occupants.

Let the stable run the entire length of the south side, being ten feet deep. Cover tightly with good, solid planks. Cut more planks six or seven feet long, and place tightly together, running under the crib, and also that portion where the cow is to stand, place these last planks at a slight decline towards the rear of the stable, by a firm blocking under the crib end. Let your scaffold be not less than eight or nine feet above. Place timbers in front of the crib, and overhead to hold stanchions which are to be made of gas pipe with a coarse screw cut on the lower end of each piece. Run the smooth end up through the top timber, slip on your chain, screw the thread end into the base with pipe tongs, and your creature is safely and comfortably secured. You will bear in mind that our cows are not going to *stand in the stocks* for any of the sins of past generations of the Bovine race, or to encourage laziness in her attendants.

Let the crib be eighteen inches wide at the bottom with a slanting side next the feeding floor. Lath the inside, and plaster with good, strong cement, and you will have a crib which will always be smooth and easily kept sweet and clean. Space off your stalls 3 to 4 feet wide, according to the size of your cows. Place a solid partition 2 ft. wide between each two stalls in front of the stanchions. The crib is to be divided by sliding doors three feet high, each door being fitted to the bottom of the crib, secured by cleats, and attached by a chain to a gas pipe, running the whole length of the stable, and furnished with crank and ratchet. When this crank is turned, all the doors will be lifted out of the way, and the crib easily swept or washed out as may be necessary.

Light.—The cow, if she could speak, when asked what she most desired, would most assuredly answer "*More Light.*" And in answer to her request, let at least one-third of the front of the stable be made of glass, kept clean. If you were stopping at a hotel and were put into a dark bedroom, there would be very likely to be some lively kicking in the morning, when paying the bill. She pays her bills both night and morning, and without kicking; give her accommodations according to her returns.

The upper portion of the windows should be hung on hinges for local ventilation, but the general system of ventilation will be at the top of the roof, so adjusted as to be opened and shut by ropes on the floor, as the outside temperature may demand. Let the covering of the stable be not only rain, but wind proof.

Yard.—Let the yard be ample for daily exercise, in the free sunshine, without which no creature can long remain in good health. The unobstructed rays of the sun are our most potent remedies for the destruction of all kinds of bacterial life.

Have large roomy sheds built on two sides of the yard,

meant only as windbreaks, but into which the cows will go directly from the stable without exposure, in stormy weather.

Have running water under one shed and salt under the other, to which access is to be had whenever the cow so desires. Keep these sheds well littered with coarse hay and straw, where the cow may lie down to chew her cud in contentment.

If running water is impracticable, a wind-mill and tank should supply its place. The custom of a stream of water running through the cribs we do not deem the most healthy and judicious method, it is open to serious objections. An abundant supply of pure water is one of the most essential elements in a well regulated dairy. Success lies only in the way where absolute cleanliness abides.

Feeding.—While a cow runs to pasture she can select such food as nature requires and best suits her taste, but when brought to the stable, must needs take such as is placed before her. By nature she is a ruminating animal and naturally subsists upon coarse kinds of herbage found in the field, which needs to be ground over a second time. The more the food is chewed the more saliva is mingled with it to aid its digestion. But where she is fed largely on ensilage, brewers sprouts, soft mashes, cotton seed meal and sometimes steamed food, the same amount of rumination is not required, is not carried on, and less amount of saliva is produced to mingle with the food, and it is not properly prepared for the digestive organs. The food ferments instead and the excreta becomes loose and foamy. These kinds of food may be cheap, stimulating, and cause a great flow of milk, but we believe injurious to the general health of the animal.

We believe more roots, more good sweet hay, and unfermented corn fodder would conduce to the usefulness and general sound health of the cows. The judicious and

economical feeding of a herd of cattle is a matter of great importance. *It is not boy's work*, but rather a matter demanding the best judgment and close attention to detail, their appetites vary day by day requiring as much food as they eat up clean and *no more*. No creature will eat food that has lain in the crib and been breathed over for hours, nor that which has lain on the floor and been trampled on. Small rations, and often repeated, are best.

Grooming.—The daily grooming of cows is of quite as much importance as of horses, and should be attended to, and the stable thoroughly cleaned each morn before milking, and after being turned into the yard, as they should be every fair day, they will complete their toilet by lapping themselves, so far as they can, and changing work by doing it for each other about the head and such parts of the body as they are unable to reach themselves. Beside the daily cleaning of the stable it should have, at least two or three times a year, a more thorough renovation. Prepare a strong solution of sulphate of iron, carbolic acid, sulphur, and corrosive sublimate in water, and with your spraying pump thoroughly spray every nook and corner, except the cribs. Then give the same a good coat of strong whitewash. The frequent use of land plaster and road dust well sprinkled over the floors, will aid in cleanliness and add much to the value of your fertilizer. I know of no substance used for food so susceptible to the effect of strong pungent odors as freshly drawn milk. It should be always removed from the stable at once.

Milking.—Milking should be done each day by the same person, and at a regular hour of the day. A new milker every day or two would dry up the best cow in the herd. The best milker is he, who, *in silence*, does his work the *most gently*, in the *shortest time*.

Dehorning.—Dehorning we look upon as one of the barbarous fads, brought about by the western cattle raiser,

whereby he can sandwich two or three more steers into a car to send to the shambles.

Cows that are treated gently will, as a general rule, treat each other in like manner. Brass balls on the horns will prevent injury and add much to the looks of a good herd of cows.

We are told in the good book, that "the Lord created nothing in vain," and no exception is made as to *cattle's horns* or *horses' tails.*

Tuberculosis.—Tuberculosis, the great scare of the present time among dairymen, we believe to be the cause of needless alarm and wanton destruction of valuable stock. It is nothing new, but has existed more or less as long as it has among the human family, showing new names at different periods. We have not forgotten the slaughter of many valuable cattle during the Pluro-Pneumonia of some thirty odd years ago. We were invited and were present at one of those *sacrificial offerings.* But the autopsies developed nothing strange or alarming and the fad soon died a natural death from exhaustion.

We do not believe that the slaughter of herds will ever either cure or eradicate the disease. It is virtually trying to *kill the dog by cutting off the tail.* Would it not display more wisdom to seek the prime cause of these occasional out-breaks, and make a well directed effort to remove that cause. Would it not be better to try to improve the conditions in which we find many herds of cows kept in low, damp, dark, villianous smelling and totally unsanitary stables, fed with the most unhealthy and stimulating rations which they can be prevailed upon to devour, with polluted water to drink.

We remember of visiting a high grade herd of cows, which had not been suffered to go out of their stalls for months, whose hoofs were grown out so that they turned up like skates, and whose bodies could well be likened to a

lot of *animated beer barrels, with elastic hoops.* This herd was kept especially to provide food for *infants and invalids*, and the M. Ds. received the cursings.

Tuberculin.—Tuberculin, the much vaunted diagnostic, was discovered some years ago by one Dr. Coch, a German, and heralded about the country as a sure cure for the disease in the human. It was found not only unsatisfactory, but decidedly harmful to the patient. It died from *exposure*, and was buried, but was *resurrected* to prove that the poor cow was guilty of harboring a disease, the penalty for which is *death*, not to herself alone but all of those with whom she may have associated, whether they were possessed of *devils* or not.

We have grave doubts of its infallibility, and the greatest good to the greatest number, both of cows and people, would arrive from its *second burial.* For it will soon be crowded out by a so-called discovery (*we call it fad*) which is already heralded from far off Genoa. Probably it will be termed *Columbian*, and an Italian physician is making arrangements for a stand up battle between the two, unless opposed by the Mayor of Brooklyn and the Governor of New York.

"Let us render unto Cæsar the things that are Cæsar's," and unto the cow a just protection.

FARM ACCOUNTS.

Actual Account of Potato Crop raised at Cochichewick Farm, No. Andover, Mass., in 1894.

POTATO FIELD, NO. 1.

Dr. 1894.		Cr.	
Apr. 27th. To plowing 39-40 of an acre,	$2.95	Sept. 1st to 10th. By 400 bu. large Potatoes at 70c.,	$280.00
May 1st. To harrowing same,	1.00	By 32 bu. small Potatoes at 20c.,	6.40
May 1st. To 45 loads of manure, at 1.33 1-3,	60.00	By ½ manure and fertilizer used remaining in soil,	39.50
May 4th. To 1 ton bone and ashes,	15.00	Total,	$325.90
May 4th. To 2 bags fertilizer,	4.00	Cost,	174.51
May 4th. To 17 bushels seed potatoes,	17.00	Profit on 156 sq. rods,	$151.39
May 4th and 5th. Labor in planting,	6.00	Rate of profit per acre,	$155.19
May 11th. To harrowing, Thomas harrow,	1.00	Yield per acre, 442.8 bushels.	
June 4th. To cultivating and weeding,	2.00	Average cost per bushel, 31 5-20c.	
June 6th and 7th. To labor hand hoeing,	7.50	Average profit per bushel, 35 1-20c.	
June 18th and 19th. To recultivating and hoeing,	10.00		
June and July. Paris Green and labor,	5.00		
July. Horse hoeing and weeding,	2.50		
Sept. 1st to 10th. To digging 432 bushels at 8c.,	34.56		
Sept. 10th. To interest on land,	6.00		
Total cost of crop,	$174.51		

The above crop was raised on well drained mellow meadow land, on which a crop of corn was grown in 1893. This field shows a satisfactory profit, because all conditions were right. In marked contrast to the above figures are those of another field raised by us the same season on dry loam. This field was planted on fertilizer, without any barnyard manure and the yield was materially reduced by the dry weather in July. This latter field yielded at the rate of 116 bushels per acre. After paying all expenses for cultivation, this field returned enough money to allow 7½ cents per bushel for digging or ½ cent less per bushel than I paid to get the work done.

Respectfully submitted,

Geo. A. Rogers,
Farm Supt.

Actual Account of Squash Crop raised at Cochichewick Farm, No. Andover, Mass., in 1894.

SQUASH FIELD.

Dr.		Cr.	
1894.			
May 1st. To plowing 2.3 acres land,	$6.90	July '94 to Feb. '95. By 16 tons of Squash sold,	245.50
May 1st to 9th. To 45 loads manure at $1.33⅓,	60.00	By 4 tons Squash fed stock,	30.00
May 9th. To harrowing 2.3 acres land,	2.30	By ½ manure remaining in soil,	30.00
May 12th. To planting Squash,	4.50		
May 12th. To 6 lbs. seed,	6.00	Total,	$305.50
May 12th. To 2 bags of fertilizer,	4.00	Cost of crop,	164.70
May 26th. To cultivating and hoeing,	1.00	Profit,	$140.80
June 1st to 12th. To cultivating, hoeing and Paris green,	6.50	Profit per acre,	61.21
June 22. To cultivating, hoeing and Paris green,	4.50		
July. To cultivating, hoeing and Paris green,	5.50		
Sept. 10th to 30th. To harvesting 20 tons Squash,	20.00		
Sept. To interest on land,	11.50		
Sept. to Feb. To marketing 16 tons Squash,	32.00		
Total cost of crop,	$164.70		

This crop of squash was raised as a secondary crop, two rows of turnip beets, mangels or cabbage being grown between each two rows of squash. The 2.3 acres produced besides the squash 250 bushels of blood turnip beets valued at $100.00, 125 bushels of mangels valued at $18.75 and 100 bbls. of cabbage valued at $50.00. The squash vines grew very fast and got the start of the mangels and cabbage so that neither of the latter varieties yielded over half what they would if the squash had been planted farther apart.

Respectfully submitted,

Geo. A. Rogers,
Farm Supt.

REPORT ON NEW MEMBERS.

The total number of new members to Nov. 1st, 1895. was twenty, including those who by receiving awards of seven dollars or upwards became members under the rule which deducts three dollars from each award to non members for membership, which membership is for life, without assessments, and entitles the member to a voice and vote in the society's business, and a copy of its annual publication of its Transactions.

The following places furnished the new members:

Beverly	1	Hamilton	2
Danvers	1	Lynn	2
Georgetown	1	Peabody	9
		Rowley	4

REPORT OF COMMITTEE ON TREADWELL FARM.

The Treadwell farm continues to be managed by John M. Bradstreet, this being the second year of his four years lease. His conduct of the farm has been fairly satisfactory to the committee. It was arranged with him to make an experiment in growing the potato crop, and his experiment is herewith submitted, together with an account of the other products of the farm, application of manure, etc.

"THE STATEMENT OF OUR EXPERIMENTAL POTATO CROP IS AS FOLLOWS:

A plot of land containing 1¼ acres was planted May 3rd and 4th, with Beauty of Hebron potatoes (eastern seed). 27 loads of stable manure were applied broadcast, and 300 lbs. Bowker's potato phosphate strewn in the furrow. Seed dropped about 18 inches apart in rows 3 ft. and 3 in.

Furrowed and covered with a two-horse potato hiller. May 9th, brush harrowed crosswise. May 11th, brushed again. May 14th, went over with weeder. Cultivated as soon as they could be seen in rows. Cultivated again and hoed June 6 and 7. Cultivated again later. A small part of the crop failed to come up and a few decayed. Harvested the crop, Oct. 1st, 2nd, 3rd, 4th. The yield was 203 bushels of marketable potatoes, and 37 bushels small ones.

LABOR.

Ploughing, harrowing, furrowing and covering, 2 men and team,	18 hours.
Hauling 9 cords manure, 2 men and team.	8 "
Spreading 9 " " " " " "	5 "
Dropping seed and applying phosphate, 2 men and team,	5 "
Brush harrowing,	2 "
Weeder,	1 "
Cultivating,	5 "
Cultivating and hoeing, 2 men and horse,	2 "
Harvesting, two men,	4 days.

300 lbs. Bowker's phosphate, $4.65.
8 bush. seed potatoes, $6.80.

CROP FROM THE FARM. 1895 (AS WELL AS CAN BE ESTIMATED).

8 tons English hay.
23 tons meadow hay.
1½ tons Hungarian.
6 acres ensilage corn.
90 bushels (ears) field corn.
3 tons squashes.
370 bushels potatoes.
128 bushels turnips.
3500 heads cabbage.

¾ acre of peas and oats (used as fodder).

35 bbl. apples.

The stock consists of 11 cows, 11 hogs, 5 horses.

65 cords stable manure, and $31.25 of commercial fertilizer were used.

Yours respectfully,

JOHN M. BRADSTREET."

TOPSFIELD, MASS., Dec. 23.

Respectfully submitted,

BENJAMIN P. WARE,

For the Committee.

IN MEMORIAM.

During the past year several of our oldest and most respected members have passed away. Among the number we notice the names of——

JOSEPH HOW, of Methuen. Mr. How was one of the oldest members, and for many years was very active in all society work. He was a farmer of the old school, industrious and successful, being wise in council, honest as the broad acres he tilled, and of a kindly disposition toward all his brethren. He was called to fill nearly all the offices in the gift of the society,—for many years a trustee, vice president, and president, and an honorary member at the time of his death. During his later years he was greatly interested in the improvement and protection of the apple. He died surrounded by his family, amidst the scenes he loved so well, leaving a character for integrity and kindness, worthy of all imitation.

Albert Kimball, of Bradford, was for many years a most active and valuable member of our society. He was brought up on a farm and was interested in everything that pertained to agriculture, although his wealth was accumulated in the shoe business, but during the last twenty years of his life he devoted his time and money to the improvement of his lands. Mr. Kimball was one of Bradford's most respected and useful citizens, and died full of years, leaving behind him an unblemished character and a host of friends to mourn his departure, and among them many of the members of the Essex Agricultural Society.

Eben Berry, of Danvers, at the time of his death was the oldest living member of the society, (so far as known) and from his earliest youth was interested in agriculture, especially in horses and cattle. He was a large land owner for many years, but devoted more than fifty years of his life to the hotel business. The Berry Tavern was a noted hostelry for hundreds of miles around. He was very popular as a landlord, and socially was one of the best of men. During the last years of his life he was very anxious to have the society locate permanently on his lands in Danvers. Mr. Berry amassed quite a fortune, and passed away amidst the regrets of his townspeople, among whom he had lived so long.

J. Henry Hill, of Amesbury, was one of our most active members, and not being so old as the above named, was better known to our young members. His business was that of a florist and horticulturist, devoting some time to market gardening. His services on our hall committees were invaluable, and he was greatly missed at our late fair. Mr. Hill was among the charter members of the Amesbury society, and as an officer, and on committees was energetic and faithful. He labored diligently and

successfully, beautifying the town by setting ornamental trees on the public streets, and on that beautiful summer day when we laid him away to rest, the trees and shrubs and plants were in full foliage and flower, and were a more fitting eulogy for the dead than any words from human lips. Mr. Hill's decease was sincerely lamented by all his townspeople.

Edward S. Knight, of Newbury, was one of the most enterprising and prosperous young farmers. Educated and cultivated in many directions, especially in music, possessed of many sterling qualities of head and heart, a universal favorite with his fellow citizens, his robust health and youthful prime gave promise of many years of usefulness, but he was suddenly cut down in the morning of his life, and was followed to his burial by as sincere mourners as ever wept for a departed friend.

O. S. Bailey, of Amesbury, in his younger years had been a very active member of our society, serving as trustee, and on many important committees, but of late years he has been less active, giving way to younger men. He was an upright and an intelligent citizen, very useful in his day, and enjoyed the confidence and respect of his townspeople, and his memory is cherished by them with a just appreciation.

A. J. Hubbard, of Peabody, was not a farmer in the general acceptation of the term, but he was interested largely in small fruits, such as grapes, plums and pears, and was quite an expert judge of the different varieties. His services were very valuable on our committees in that department. For several years before his death, he was engaged in selling and adjusting tree protectors, and was thus brought into close contact with our farmers through-

out the county. Mr. Hubbard was an upright citizen, and useful in the town where he lived and died.

A. F. Harvey, of Gloucester, was an old member of our society, and a long time resident of Gloucester, where he was engaged in the stove and tinware business for many years. He was not a practical farmer, but was largely interested in the poultry business. He was an expert judge, and served for many years on committees in that department of our exhibitions. Mr. Harvey was a man of good moral character, and a useful citizen.

The Hon. George W. Jackman, Jr. died at his home in Newburyport, Jan. 4th, 1895, aged 81 years, after a long illness. He was a man of marked ability and possessed that rare quality, sound commonsense, which, coupled with his indomitable will, made his undertakings whether in private or public, a success. No better instance of a self-made man has ever occurred within our city. He was always foremost in any measure to promote the welfare of his native place.

He held position of Mayor in 1861–2–4–5 and 7, was elected several times Representative, was Postmaster under Buchanan's administration, Collector of Port under Cleveland in 1886. He was one of Newburyport's prominent ship builders. During the war he built two gun boats for the U. S. N., the Marblehead and Ascutney, also two large ocean steamers Erie and Ontario. Mr. Jackman's life was an active one from youth to old age.

Daniel C. Batchelder, of Newburyport, died at his home in that city during the past year, aged 73 years. He came from New Hampshire stock, having been born in Deerfield, N. H., in 1812. When 24 years of age he came to this city and here he has made his home ever since. In 1853 he purchased of S. P. H. Drake what was the New-

buryport, Georgetown, Haverhill, Lawrence & Boston express, and had an office at No. 33 State street in this city and 8 Court street, Boston. He was brave and fearless and was ready at any time to face danger when duty called him. He was for many years a lieutenant in the Cushing Guard, and for many years a member of the Veteran Artillery Company, being its janitor at the time of his death. He has been agent of the board of health since 1890 and was in that office, as in all others that he filled, faithful and honest. He leaves a widow to mourn the death of a true and devoted husband, who was respected and beloved by all who knew him.

Thomas K. Bartlett, of Newburyport, died during the past year at his home on the West Newbury road. He was in the 80th year of his age, and was a very highly respected citizen and a prosperous and successful farmer, fruit-grower and milkman.

Mr. Bartlett was president of the Common Council in 1878, and member of the Essex Agricultural Society for many years. He had been in failing health for some time. The deceased was a man universally liked and his death was received with deep regret. A son survives him.

Enoch Merrill died in Newburyport, Dec. 12, 1894. He was born in 1825, and spent the most of his life here in farming, and dealing largely in live stock, being well-known in this part of the county.

Jere. Cashman, of Newburyport, died during the past year from the result of a railroad accident, aged 34 years. Mr. Cashman was a well-known and popular contractor. He was born in Newburyport, and had worked his way from a poor boy so as to leave a competency for his family. He was a man of good judgment, fairly well educated, and a strictly honest man. His dealings with his fellowmen

were all above reproach, and his word was as good as his bond. There was no contract so large but what he was always ready to say what he would do it for, and if he had it, the work was satisfactory. He was a man who will be sadly missed among the laboring classes as he always could find work for a worthy man.

Mr. Asa Wade, of Ipswich, died in that town April 28, 1895, aged 88 years. He had been a member of this society nearly 30 years, and formerly took an active interest in its welfare. He was a native of Ipswich, and of the old Puritan stock.

William F. Treadwell, of Ipswich, died in Ipswich, Sept. 3, 1895, aged 80 years. He joined this society in 1875. He was born in Ipswich.

John J. Marsh, of Haverhill, died during the past year. He was a prominent man in his city and made fine exhibits to the Fair when it was held in the northern part of the county.

E. T. Ingalls, of Haverhill, died during the past year.

Isaac Carruth died in Andover, August 14, 1895, aged 91 years. Had long been a member of the society, was a large farmer and a prominent and valuable citizen, had been one of the Selectmen of the town.

Edward C. Upton died Oct. 30, 1895. Was one of Andover's old and honored citizens. For many years he conducted the Mason business, was also interested in farming.

Moses Foster, of Andover, died June 27, 1895, aged 73 years. He was many years a member of the society, and took much interest in its transactions. For nearly half a century everything in town life that called for loyal citizenship, sound business principle, integrity and honor, had

interested in it the law student and the bank cashier, whose life is now ended.

John Parker Conant, born in Hamilton, son of J. P. and Annie Edwards Conant, died in Wenham, May 1, 1895, aged 47 years, 6 months, 6 days. A carpenter by trade, he cultivated well a few good acres of land and was for many years the chief support of a widowed mother: he was always active in town affairs, married late in life, and was a well known lover of the horse and dog.

Andrew A. Scott was born at Salem, 1832, died at Saugus, Dec. 17th, 1894. He was a member of the firm of F. Scott & Son, woollen manufacturers, and their successor. His business was located upon the site of the ancient iron works establishment on Saugus river. Mr. Scott was a farmer, and took a lively interest in the management and cultivation of his lands, especially the hay crop. He was esteemed as a business man and citizen.

John Brooks Faxon was born in Boston, Mass., August 23, 1868. Upon graduating from the English High School in Boston, he entered the Seed House of the M. B. Faxon Co., Saugus, Mass., where he was partner at the time of his death. He died in Asheville, North Carolina, April 27, 1894, in the twenty-sixth year of his age.

CONSTITUTION

OF THE

ESSEX AGRICULTURAL SOCIETY.

ARTICLE 1. There shall be a President, four Vice Presidents, a Secretary, and a Treasurer, who shall be Trustees, *ex-officio*. The President, Vice Presidents and Secretary shall be elected at the annual meeting by ballot and the Treasurer by the Trustees, annually, at their meeting in November. In addition to these, one Trustee shall be elected annually for each town in the County, and the Trustee for each town shall be elected by members of the Society in said town, at a meeting called for that purpose,* in accordance with notice issued by the Secretary, and shall continue in office until another is elected in his stead: and such election shall be final, and shall constitute the Trustee so elected a member of the Board of Trustees of the Society; and the result of the election in each town shall be communicated as early as possible to the Secretary.

ART. 2. There shall be an Annual Meeting of the Society, at such times as the Trustees shall determine, at which all officers shall be elected: Twenty members at least shall be necessary to constitute a quorum for the transaction of business.

ART. 3. If at any meeting of the Society, or the trustees, the President and Vice Presidents shall be absent, the members present may appoint one from among them to preside at such meeting.

ART. 4. The President, or in case of his absence, either of the Vice Presidents, with the advice of the Trustees,

*These meetings are held the last Tuesday in October, and the Trustees elected commence their duties at the November meeting of Trustees.

may call a special meeting of the Society; or whenever a written application, with the reason assigned therefor, shall be made by any twelve members of the Society, to the Presidents and Trustees, they shall call such meeting.

Art. 5. The meetings of the Trustees shall be held at such time and place as they shall from time to time agree upon; seven of whom, with the presiding officer, shall make a quorum.

Art. 6. The Trustees shall regulate all the concerns of the Society, during the intervals of its meetings; propose such objects of improvement to the attention of the public, publish such communications, and offer premiums in such form and value as they think proper (provided the premiums offered do not exceed the funds of the Society); and shall lay before the Society, at each of its meetings, a statement of their proceedings and of the communications made to them.

Art. 7. The secretary shall take minutes of all the votes and proceedings of the Society and of the Trustees, and enter them in separate books; and shall record all such communications as the Trustees shall direct. He shall write and answer all letters relating to the business of the Society.

Art. 8. The Treasurer shall receive all monies due or payable to the Society, and all donations that may be made to it, for which he shall give duplicate receipts, one of which shall be lodged with the Secretary, who shall make a fair record thereof. The Treasurer shall from time to time pay out such monies as he shall have orders for from the Trustees; and shall annually, and whenever thereto required, render a fair account of all his receipts and payments to the Society or a committee thereof. He shall give bonds for the faithful discharge of his duty, in such sums as the Trustees shall direct, and with such sureties.

Art. 9. A committee shall be appointed annually by

the Trustees, to audit the Treasurer's accounts, who shall report to the Society; and the same being accepted, shall be entered by the Secretary in his books.

ART. 10. In case of death, resignation, incapacity, or removal out of the County, of the Secretary or of the Treasurer, the Trustees shall take charge of the official books, papers, and other effects, belonging to the office that may be vacated, and give receipts for the same; which books, papers, etc., they may deliver to some person whom they may appoint to fill the office until the next meeting of the Society, at which time there shall be a new choice.

ART. 11. *Any citizen of the County may become a member of the Society, by paying the sum of THREE DOLLARS to increase the permanent fund of the institution.

ART. 12. A committee shall be raised from time to time, to solicit and receive subscriptions for raising a fund for encouraging the noblest of pursuits, the Agriculture of our county; the same to be sacredly appropriated to that purpose.

ART. 13. All ordained ministers of the Gospel who reside within the County, shall be admitted honorary members of the Society.

ART. 14. In addition to the usual number of Trustees annually elected, the past Presidents of the Society shall be honorary members of the Board of Trustees.

ART. 15. The foregoing constitution may be amended by a proposition of the amendment in writing by a member at a regular meeting: the same to lie over for the action at the next annual meeting of the Society.

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*Members will receive from the Secretary a "certificate of membership." No fines or assessments are ever imposed. Members are entitled to vote in all its transactions, with free use of the Library and a copy of the printed "Transactions" each year.

A premium of six dollars is now offered to the resident of the County obtaining the largest number of new members during the year ending Nov. 1.

Dr. GILBERT L. STREETER, TREAS., IN ACCOUNT WITH THE ESSEX AG'L SOCIETY. Cr.

1894-5.			1894-5.	
Nov.	To Bank Dividends for October,	$ 321 20	By Balance of last Account,	$1470 63
	State Tax refunded,	214 54	Amount of Premiums and Gratuities Awarded,	1844 50
	Bank Dividends for April,	314 70	Rent paid to the Salem Athenæum,	25 00
	Interest on Mortgage Note,	59 50	Bills on Account of Exhibition of 1894,	126 55
	Cash received for Members,	69 00	Expenses at Treadwell Farm,	48 49
	Received from Committee on Exhibition of 1894,	383 59	Advertising and Printing, including Transactions,	446 19
	Income from Treadwell Farm,	181 25	Expenses of Institutes,	63 75
	State Bounty,	600 00	Interest on Temporary Loan,	176 25
	Unclaimed Premiums,	111 75	Secretary's Account,	249 35
	Balance due the Treasurer,	2249 38	Treasurer's Account,	54 00
		$4504 71		$4504 71

Funds belonging to the Society Nov. 1, 1895.

10 shares National Hide & Leather Bank, Boston,	$ 1101 87
3 shares Revere National Bank, Boston,	377 62
18 shares First National Bank, Salem,	1914 66
18 shares Salem National Bank, Salem,	2000 00
42 shares Asiatic National Bank, Salem,	1281 25
12 shares Mercantile National Bank, Salem,	1226 50
5 shares First National Bank, Danvers,	375 00
23 shares Merchants National Bank, Salem,	1189 50
8 shares National Exchange Bank, Salem,	800 00
11 shares Warren National Bank, Peabody,	1595 40
15 shares South Danvers National Bank, Peabody,	1471 25
Mortgage Loan,	1000 00
	$ 14,333 05
Amount due the Treasurer,	2,249 38
	12,083 67
Amount reported last year,	12,862 42
Loss,	778 75

SALEM, Dec. 31, 1895.

The above account has been examined this day, and is found to be correctly cast and properly vouched, and the securities as stated.

JOS. H. PHIPPEN, Auditor.

OFFICERS OF THE SOCIETY.

FOR 1895-96.

PRESIDENT.

FRANCIS H. APPLETON, of Peabody.

VICE-PRESIDENTS.

JAMES J. H. GREGORY, of Marblehead.
OLIVER S. BUTLER, of Georgetown.
HORATIO G. HERRICK, of Lawrence.
ASA T. NEWHALL, of Lynn.

SECRETARY.

JOHN M. DANFORTH, of Lynnfield.

TREASURER.

GILBERT L. STREETER, of Salem.

HONORARY TRUSTEE.

BENJAMIN P. WARE, of Marblehead.

DELEGATE TO THE STATE BOARD OF AGRICULTURE.

FRANCIS H. APPLETON, of Peabody

TRUSTEES.

John J. Mason, Amesbury,
Charles C. Blunt, Andover,
John W. Lovett, Beverly,
William K. Cole, Boxford,
Charles Haseltine, Bradford,
Edw. E. Woodman, Danvers,
Elias Andrews, Essex,
Sherman Nelson, Georgetown,
Osman Babson, Gloucester,
Samuel B. George, Groveland,
Albert W. Dodge, Hamilton,
B. Frank Barnes, Haverhill,
James W. Bond, Ipswich,
J. D. Drew, Lawrence,
Edwin Bates, Lynn,
John H. Perkins, Lynnfield,
Amos P. Alley, Marblehead,
George W. Sargent, Merrimac,
G. S. Phippen, Methuen,
Geo. A. Currier, Middleton,
Herbert F. Otis, Nahant,
Nathaniel Dole, Newbury,
Chas. W. Nelson, Newburyport,
Peter Holt, Jr., No. Andover,
E. Pope Barrett, Peabody,
Allen Smith, Rockport,
J. Scott Todd, Rowley,
Nathan R. Morse, Salem,
John Q. Evans, Salisbury,
Lewis W. Hawkes, Saugus,
David Warren, Swampscott,
Chas. J. Peabody, Topsfield,
Daniel W. Friend, Manchester,
David Pingree, Wenham,
W. E. Merrill, West Newbury.

LIST OF NEW MEMBERS NOT PREVIOUSLY REPORTED.

Elmer A. Lothrop, Beverly,
Samuel L. Sawyer, Danvers,
Charles T. Balch, Groveland,
Randall B. Day, Groveland,
Edwin H. George, Groveland,
Robert Foss, Hamilton,
Frank V. Wright, Hamilton,
James M. Teel, Lynn,
Warren Bushby, Lynn.
Jacob B. Stevens, Peabody,
J. H. J. Colcord, Peabody,
H. A. Harrington, Peabody,
Geo. Fred Osgood, Peabody,
Benj. N. Moore, Peabody,
Elizabeth C. Kimball, Peabody,
T. C. Durkee, Peabody,
Jacob G. Bodge, Peabody,
C. E. Hinkley, Peabody,
Geo. F. Carlton, Rowley,
Paul A. Dodge, Rowley.

List of Premiums Awarded 1895.

BULLS.

Robert Foss, Hamilton, Jersey, first premium,	$6 00
Robert Foss, Hamilton, Jersey, second premium,	4 00
James C. Poor, No. Andover, Holstein, first premium,	6 00
James C. Poor, No. Andover, Holstein, second premium,	4 00

MILCH COWS.

James C. Poor, No. Andover, Holstein cow, first premium,	$8 00
James C. Poor, No. Andover, Holstein cow, first premium,	7 00
James C. Poor, No. Andover, Holstein cow, first premium,	7 00
James C. Poor, No. Andover, Holstein cow, first premium,	7 00
James C. Poor, No. Andover, Holstein cow, second premium,	4 00
James C. Poor, No. Andover, Grade cow, second premium,	4 00

HERDS OF MILCH COWS.

James C. Poor, No. Andover, 6 Holstein and Grade cows, first premium,	$10 00

HEIFERS.

Robert Foss, Hamilton, Jersey, first premium,	$5 00
Robert Foss, Hamilton, Jersey, first premium,	4 00
James C. Poor, No. Andover, Holstein, first premium,	5 00
James C. Poor, No. Andover, Holstein, first premium,	4 00
James C. Poor, No. Andover, Holstein, first premium,	4 00
James C. Poor, No. Andover, Holstein, second prem.,	3 00
James C. Poor, No. Andover, Holstein, second prem.,	2 00

James C. Poor, No. Andover, Grade, first premium, 5 00
James C. Poor, No. Andover, Grade, first premium, 4 00
James C. Poor, No. Andover, Grade, first premium, 4 00

WORKING OXEN.

Frank E. Kimball, Danvers, working oxen, first prem., $8 00

FARM TEAM.

James C. Poor, No. Andover, 2 pair horses, first prem., 5 00

STALLIONS, FARM AND DRAFT.

J. W. Carlisle, Ipswich, Percheron, first premium, 8 00

STALLIONS, FOR DRIVING PURPOSES.

A. B. Forbes, Byfield, stallion, "Seranta," first prem., 8 00
E. A. Lothrop, Beverly, stallion, "Col. Osgood," second premium, 5 00
E. A. Lothrop, Beverly, stallion, "Pure Red," first premium, 5 00
A. R. Lewis, Bradford, stallion, "Starr," second premium, 3 00
Robert M. Leach, Danvers, coach stallion, "Gen. Lothair," Diploma and 5 00

BROOD MARES.

A. B. Forbes, Byfield, Brood Mare, Clayene, first premium, $8 00

FAMILY HORSES.

A. B. Forbes, Byfield, family mare, first premium, $6 00
Edwin Bates, Lynn, family mare, second premium, 4 00

GENT'S DRIVING HORSES.

B. G. Kimball, Bradford, pair horses, first premium, $8 00
Charles Sanders, Peabody, pair horses, second prem., 5 00
E. A. Lothrop, Beverly, single horse, first premium, 6 00
A. B. Forbes, Byfield, single horse, second premium, 4 00

SINGLE FARM HORSES.

W. L. Hill, Peabody, first premium,	$6 00
Frank Lyford, Danvers, second premium,	4 00
B. H. Farnham, No. Andover, first premium,	6 00
Arthur Durkee, Peabody, second premium,	4 00

PAIRS FARM HORSES.

James C. Poor, No. Andover, first premium,	$8 00
James C. Poor, No. Andover, first premium,	8 00
Charles S. Little, Merrimac, second premium,	5 00

COLTS, FARM AND DRAFT.

W. L. Hill, Peabody, first premium,	$6 00
James C. Poor, No. Andover, second premium,	4 00

COLTS FOR DRIVING PURPOSES.

H. H. Demsey, Wenham, first premium,	$5 00
D. F. Duffey, Andover, first premium,	6 00
D. P. Rogers, Salem, second premium,	4 00
D. L. Story, Beverly, second premium,	3 00
A. B. Forbes, Byfield, first premium,	4 00
W. F. Kinsman, Ipswich, first premium,	4 00
H. H. Demsey, Wenham, second premium,	2 00
E. A. Lothrop, Beverly, second premium,	2 00
W. F. Kinsman, Ipswich, first premium,	4 00
A. B. Forbes, Byfield, second premium,	2 00

SWINE, LARGE BREEDS.

W. L. Hill, Peabody, Cheshire boar, first premium,	$5 00
W. L. Hill, Peabody, Cheshire sow and pigs, first premium,	5 00
W. L. Hill, Peabody, Chester white boar, first prem.,	5 00
W. L. Hill, Peabody, Chester white sow and pigs, first premium,	5 00
W. L. Hill, Peabody, 6 weaned pigs, first premium,	5 00
W. L. Hill, Peabody, Poland China pigs, first prem.,	5 00
W. L. Hill, Peabody, large Yorkshire boar, first prem.,	5 00

W. L. Hill, Peabody, O. I. Chester white, second prem., 3 00
W. L. Hill, Peabody, 7 weaned pigs, O. I., second premium, 3 00

SWINE, SMALL BREEDS.

W. L. Hill, Peabody, medium Yorkshire boar, first premium, $5 00
W. L. Hill, Peabody, small Yorkshire boar, second premium, 3 00
Frank Stanley, Peabody, Yorkshire sow and pigs, first premium, 5 00
John P. Collins, Peabody, Yorkshire sow and pigs, second premium, 3 00

SHEEP.

Lewis P. Hawkes, Saugus, 10 Shropshire sheep, first premium, $5 00
Lewis P. Hawkes, Saugus, Shropshire lambs, first premium, 4 00
Lewis P. Hawkes, Saugus, Buck, first premium, 5 00

PLOUGHING WITH DOUBLE TEAM.

James C. Poor, No. Andover, 4 Horses, first premium, $8 00

PLOUGHING WITH TWO HORSES.

T. C. Durkee, Peabody, first premium, 6 00
G. Dynneson, Peabody, second premium, 4 00

PLOUGHING SINGLE OX TEAM.

F. E. Kimball, Danvers, first premium, 6 00

PLOUHING SULKY PLOUGH.

O. F. Newhall, Peabody, first premium, 6 00

PLOUGHING BY BOYS UNDER 15 YEARS OF AGE.

Charles S. Little, Merrimac, first premium, 8 00

GRAIN CROPS.

J. J. H. Gregory, Marblehead, Crop of Rye, first premium,	7 00
C. K. Ordway & Son, West Newbury, Crop of Oats, first premium,	7 00
Charles W. Nelson, Newburyport, Crop of Corn, first premium,	7 00
John C. Tarlton, West Newbury, Crop of Corn, second premium,	4 00

SMALL FRUITS.

J. Webb Barton, Danvers, Crop of Strawberries, first premium,	8 00
Oscar Gowen, West Newbury, Crop of Raspberries, first premium,	8 00
Amos Haseltine, Haverhill, Statements, gratuity,	5 00

ROOT CROPS.

John H. George, Methuen, Crop of Onions, first premium,	8 00
Kent & Marsh, Newburyport, Crop of Onions, second premium,	5 00
Charles C. Blunt, Andover, Crop of Carrots, first premium,	8 00
John H. George, Methuen, Crop of Potatoes, first premium,	8 00
Fred Stultz, West Newbury, Crop of Mangolds, first premium,	8 00
James Manning, Topsfield, Crop of Turnips, first premium,	8 00

FARMS.

Oliver Roberts, Danvers, first premium,	20 00

FOREST TREES.

P. A. True, Salisbury, first premium,	8 00

OTHER AWARDS.

Awarded by	Committee	on	Poultry,	$29	00
"	"	"	Harrows,	9	00
"	"	"	Agricultural Implements,	21	00
"	"	"	Carriages,	11	00
"	"	"	Bread and Canned Fruit,	19	00
"	"	"	Pears,	31	50
"	"	"	Apples,	46	00
"	"	"	Peaches, Grapes, etc.	77	75
"	"	"	Plants and Flowers,	51	25
"	"	"	Vegetables,	97	00
"	"	"	Grain and Seed,	5	00
"	"	"	Counterpanes and Afghans,	22	00
"	"	"	Carpets and Rugs,	11	50
"	"	"	Manf. from Leather,	9	00
"	"	"	Manf. and General Mdse.,	15	00
"	"	"	Fancy Work,	39	00
"	"	"	Art Work,	41	75
"	"	"	Work by Children,	6	75

RECAPITULATION.

Awarded for ploughing,		$38 00

FARM STOCK.

Awarded for Bulls,	$20 00	
" " Milch Cows,	37 00	
" " Herds of Milch Cows,	10 00	
" " Heifers,	39 00	
" " Working Oxen,	8 00	
" " Team used on Farm,	5 00	
" " Horses,	162 00	
" " Swine,	57 00	
" " Sheep,	14 00	
" " Poultry,	29 00	
		$381 00

FIELD AND EXPERIMENTAL CROPS.

Awarded for Grain Crops,	$25 00	
" " Root Crops,	45 00	
" " Fruit Crops,	21 00	
		$91 00

FARM AND GARDEN PRODUCTS.

Awarded for Grain and Seed,	$ 5 00	
" " Vegetables,	97 00	
" " Fruits,	155 25	
" " Plants and Flowers,	51 25	
		$308 50

DOMESTIC MANUFACTURES.

Awarded for	Bread, Canned Fruit, etc.,	$19 00	
" "	Counterpanes and Afghans,	22 00	
" "	Carpetings and Rugs,	11 50	
" "	Articles Manuf. from Leather,	9 00	
" "	Manuf. and General Mdse.,	15 00	
" "	Fancy Work,	39 00	
" "	Works of Art,	41 75	
" "	Children's Work,	6 75	
			$164 00

MISCELLANEOUS.

Awarded for	Agricultural Implements,	$21 00	
" "	Carriages,	11 00	
" "	Farms,	20 00	
" "	Essays and Reports,	26 00	

TOTAL.

The amount of $1,089.50 was awarded to 324 individuals and firms in 32 different cities and towns in the county as follows :—

Amesbury,	$6 00	Merrimac,	$13 00
Andover,	17 50	Methuen,	21 00
Beverly,	27 50	Middleton,	2 00
Boxford,	26 50	Newbury,	70 50
Bradford,	15 00	Newburyport,	20 50
Danvers,	92 75	North Andover,	140 50
Essex,	50	Peabody,	349 50
Groveland,	2 50	Rockport,	2 00
Hamilton,	19 00	Rowley,	8 00
Haverhill,	7 00	Salem,	38 25
Ipswich,	17 00	Salisbury,	8 00
Lawrence,	7 50	Saugus,	14 00
Lynn,	95 00	Swampscott,	10 50
Lynnfield,	3 50	Topsfield,	1 00
Manchester,	1 00	Wenham,	7 50
Marblehead,	9 00	West Newbury,	36 00

FINANCIAL STATEMENT.

Receipts for Admission to Hall and Grounds,	$2226 00	
Receipts for Admission to Dinner,	124 00	
" " Grounds for various purposes,	244 75	
		$2594 75
Total Expenses at Hall and Grounds,		980·79
Amount paid Treasurer,		$1613 96

1896.

PREMIUM LIST OF

Essex Agricultural Society,

FOR THE

SEVENTY-SIXTH ANNUAL CATTLE SHOW AND FAIR.

Duties of Trustees.

The trustee of each town is instructed to see the several members of Committees in his town previous to the Show, and urge upon them the importance of attending to their duties. Also impress upon exhibitors from localities near to the Exhibition, the importance of entering their exhibits for the hall, the afternoon and evening of Monday, in fairness to those from a distance, who are obliged to come Tuesday.

To be prompt at the meeting in June for filling Committees, and at the meeting of the Society for filling vacancies in committees on the first day of the Exhibition, making sure that the names proposed at those meetings are of persons who will serve.

Duties of Committees.

Committees on live stock and articles exhibited on the Fair Grounds should appear at the Secretary's office on the grounds, at one o'clock, punctually, on the first day of the exhibition, and there organize, take the books of entry, and proceed at once to business. Committees in hall, should take the books of entry from the Superintendent, promptly after the entries close.

Full reports of awards by committees, on the blanks furnished by the Secretary, to be signed by all the members acting on the same, are required of each committee.

Three members of any committee consisting of more than that number are authorized to act.

☞No member of the Society shall act on any committee of which he is an exhibitor in the same class.

The Diploma of the Society being considered the highest premium that can be awarded, no committee is authorized to award it, except for animals and articles *of special merit*, deserving of indorsement and recommendation by the Society.

No committee is authorized to award gratuities, except the committee on agricultural implements, carriages, bread, honey and canned fruits, domestic manufactures, fruits, vegetables in hall, and flowers; or any premium, unless the rules of the Society have been strictly complied with. Neither shall they award premiums or gratuities in excess of the amount appropriated.

No gratuity is to be awarded of less than fifty cents.

The several committees are requested to affix premium cards, and also on animals, blue, white and red printed premium ribbons (which may be had of the Secretary or assistant on the grounds and at the hall), for the several animals or articles designating the grade of premium awarded each, and the name of the person to whom awarded, and special care should be taken that the cards issued correspond with the awards in their report to the Society.

The reports of awards of premiums on ploughing and on animals and articles exhibited at the Show, must be delivered promptly to the Secretary for announcement on Thursday.

The Society offers liberal premiums for the best reports of committees; and the chairmen of the several committees are requested to present to the Secretary a full report explanatory of the opinions of the committee on the matter referred to them, within two weeks after the awards are made at the Show, for publication in the Transactions.*

Reports on farms, crops, etc., to be presented previous to the meeting of the Trustees in November.

Any member of a committee who cannot serve on the same *is requested to give notice* to the Secretary, *before the Show*, so that the vacancy may be filled.

Each member of the several committees will receive a ticket of admission to the hall of exhibition, on application to the Secretary.

*Chairmen of committees will please notice this request.

General Rules.

Competitors are requested to carefully read the rules and premium list before making entries.

Claims (entries) for premiums to be awarded at the Exhibition on the Fair Grounds, other than live stock, must be entered with the Secretary of the Society, or his agent, and in the Exhibition Hall, on or before 11 A. M., of the first day thereof.

All entries of live stock must be entered with the Secretary at least one week previous to the holding of the Fair, and no entries will be received after that date.

Any person *not a member of the Society*, awarded seven dollars and upwards, shall receive a certificate of membership, for which three dollars of his award will be taken to increase the funds of the Society.

Diplomas awarded will be delivered and premiums paid, to the person to whom the premium or gratuity is awarded, or an agent duly authorized, on application to the Treasurer, at First National Bank, Salem, on and after the fourth Monday of November.

All premiums and gratuities awarded, the payment of which is not demanded of the Treasurer on or before the first day of September next succeeding the Exhibition, will be considered as given to increase the funds of the Society.

In all cases the reports of awards of premiums and gratuities made by the several committees and adopted by the Society shall be final. *Committees should see that the premium cards issued, correspond with the premiums and gratuities awarded in their reports.*

No person shall be entitled to receive a premium, unless he complies with the conditions on which the premiums are offered, and by proper entry as required, gives notice of his intention to compete for the same; and committees are instructed to award no premium unless the animal or article offered is worthy.

No animal or object that is entered in one class, with one committee, shall be entered in another class, except town teams, working oxen, working steers, (three year old steers may be entered for ploughing in a double team) and farm horses which may be entered for ploughing, and milch cows, which may be entered with a herd.

All animals kept in the County, are eligible for premium, whether their owner lives in the County or not.

In regard to all subjects for which premiums are offered, it

is to be distinctly understood that the Trustees reserve to themselves the right of judging the quality of the animal or article offered ; and that no premium will be awarded unless the objects of them are of decidedly superior quality.

Pure Bred Animals, defined by the State Board of Agriculture.

The Proof that an animal is so bred should be a record of the animal or its ancestors, as recorded in some herd book, recognized by leading breeders and the public generally, as complete and authentic.

Standards adopted:—American Jersey C. C. Register and American Jersey Herd Book, Ayrshire Record and Holstein Herd Book.

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Premiums to be Awarded at the Show.

The Committees will take notice that no premium will be awarded unless the animals or objects are of a decidedly superior quality.

DIPLOMAS may be awarded for ANIMALS OR ARTICLES of *special* merit, in all departments of the Fair.

——

Cattle and other Farm Stock.

TO BE ENTERED IN THE NAME OF THEIR REAL OWNER.

All animals to be eligible to a premium, shall have bee raised by the owner within the County, or owned by the ex hibitor within the County, four months previous to the dat e of exhibition, except Working Oxen and Working Steers.

All animals, whether teams for ploughing, or animals entered for premium or exhibition, will be fed during the Exhibition, and longer, when they are, of necessity, prevented from leaving, at the expense of the Society.

BULLS.

*Ayrshire, Jersey, Short Horn, Devon, Holstein, Guernsey, or of any other recognized breed, for each breed.

Two years old and upwards, premiums,	$6, 4
Under two years old, for each breed,	$4, 3

BULLS OF ANY AGE OR BREED.

For the best bull of any age or breed, with five of his stock not less than one year old, quality and condition to be taken into account, and especially the adaptability of the animal to the agriculture of the county. Diploma and $8

NOTE.—Competitors are required to give a written statement of pedigree, and committees are requested to be particular in this respect, and return them to the Secretary with report.

MILCH COWS.

For Milch Cows, either Foreign, Native or Grade, with satisfactory evidence as to quantity and quality of milk by weight during one full month, premiums, $8, 5

Milch Cows, Ayrshire, Jersey, Devon, Short Horn, Holstein, Guernsey, or any other recognized breed, four years old and upwards, premiums for each breed, $7, 4

For Native or Grade Cows, four years old and upwards, premiums, $7, 4

For the cows that make the most butter in a single week from June 1st to September 15th, premiums, $7, 4

NOTE.—A written statement will be required of the age and breed of all Milch Cows entered, and time they dropped their last calf, and when they will next calve, the kind, quality and quantity of their food during the season, and the manner of their feeding, which statement is to be returned to the Secretary with Committee's report.

HERDS OF MILCH COWS.

For herds of Milch Cows, not less than five in number, to be exhibited at the Show, and a correct statement of manner of keeping and yield for one year preceding the Show, premiums, Diploma and $10, 8

For the greatest produce of milk on any farm, in proportion to the number of cows producing it, not less than four, from April 1, 1895 to April 1, 1896, statement to be made of the exchanges made, manner, and expense of food, use made of milk, and such other facts as will illustrate the entire management, special regard being had to the mode in which the account is kept, premium, Diploma and $8

NOTE.—The above-mentioned statements are to be returned to the Secretary with Committee's report. The Committee can accept statements dating from January 1st, preceding the Show.

HEIFERS.

FIRST CLASS.—Ayrshire, Jersey, Short Horn, Devon, Holstein, Guernsey, or any other recognized breed, under four years old in milk, premiums for each breed, $5, 3

Two years old of each breed, that have never calved, premiums, $4, 2

One year old and under, of each breed, premiums, $4. 2

SECOND CLASS.—Native or Grade Milch, under four years old, premiums, $5, 3

Two years old, that have never calved, premiums, $4, 2

One year old and under, and less than two, premiums, $4, 2

WORKING OXEN AND STEERS.

Stags excluded. For pairs of Working Oxen under eight and not less than five years old, taking into view their size, power, quality and training, premiums, $8, 6

For pairs of Working Steers, four years old, to be entered in the name of the owner, premiums, $6, 4

NOTE.—The Committee are required to consider the quality and shape of the cattle as well as their working capacity. The training of working oxen and steers will be tested by trial on a cart or wagon containing a load weighing two tons for oxen, and three thousands pounds for steers. ☞At the time of entry a certificate of the weight of the cattle must be filed with the Secretary.

STEERS.

For pairs of three year old Steers, broken to the yoke, premiums, $5, 3

For pairs of two year old Steers, premiums, $4, 2

For pairs of yearling Steers, and under, premiums, $3, 2

STALLIONS, FARM AND DRAFT.

For Stallions for Farm and Draft purposes, four years old and upwards, diploma, or premiums, $8, 5

For Stallions for Farm and Draft purposes, three years old, premiums, $5, 3

For best Stallion of any age, and five colts of his stock, not less than five years old, quality and condition to be taken into account, Diploma and $8

STALLIONS FOR DRIVING PURPOSES.

For Stallions for Driving purposes, four years old and upwards, premiums, Diploma and $8, 5

For Stallions for Driving purposes, three years old, premiums, Diploma and $5, 3

For best Stallion of any age and five colts of his stock, not less than one year old, quality and condition taken into account, Diploma and $8

NOTE.—No stallion will be entitled to a premium unless free from all apparent defects capable of being transmitted. All stallions entered in either class must have been owned by the exhibitor four months previous to the exhibition.

BROOD MARES, FARM AND DRAFT PURPOSES.

For Brood Mares for Farm and Draft Purposes, with their foal not more than eight months old, by their side, premiums, $8, 5

BROOD MARES, DRIVING PURPOSES.

For Brood Mares for Driving Purposes, with their foal not more than eight months old, by their side, premiums,

NOTE.—No brood mare will be entitled to a premium unless free from all apparent defects capable of being transmitted.

FAMILY HORSES.

For Family Horses, premiums, $6, 4

NOTE.—No horse will receive a premium unless free from all unsoundness.

GENTLEMEN'S DRIVING HORSES.

For Gentlemen's Driving Horses, premiums, $6, 4
For pairs of Gentlemen's Driving Horses, premiums, $8, 5

FARM HORSES.

For Farm Horses, weighing 1,200 lbs. and over, premiums, $6, 4

For Farm Horses, weighing less than 1,200 lbs., premiums, $6, 4

NOTE.—No horse will be allowed except those actually used on farms, whether the owner has a farm or not. The weight of the load to be used in trial of Farm Horses is to be fixed upon by the committee of arrangements for drafting, the difference in the load for horses of 1,200 lbs. and over, and those under 1,200 lbs. to be 1,000 lbs., and between the two classes of pairs 2 000. No obstruction shall be placed either before or behind the wheels in trials of Draft Horses of either class, but wheels shall be blocked behind to hold the load when a team stops going up hill.

PAIRS OF FARM HORSES, WEIGHING 2,500 LBS. AND OVER.

For pairs of Farm Horses weighing 2,500 lbs. and upwards (see above note), premiums, $8, 5

PAIRS OF FARM HORSES, WEIGHING LESS THAN 2,500 LBS.

For pairs of Farm Horses weighing less than 2,500 lbs. (see above note), premiums, $8, 5

COLTS FOR FARM PURPOSES, 3 AND 4 YEARS OLD.

For Mare or Gelding four year old Colts, premiums, $6, 4
For Mare or Gelding three year old Colts, premiums, $5, 3

COLTS FOR FARM PURPOSES, 1 AND 2 YEARS OLD.

For Stallion, Gelding or Mare, two year old Colts, prem., $4, 2
For Stallion, Gelding or Mare, yearling Colts, prem., $4, 2

COLTS FOR DRIVING PURPOSES.

THREE AND FOUR YEARS OLD.

For Mare or Gelding four year old colts, premiums, $6, 4
For Mare or Gelding three year old colts, premiums, $5, 3

ONE AND TWO YEARS OLD.

For Stallion, Gelding or Mare two year old colts, prem., $4, 2
For Stallion, Gelding or Mare yearling colts, prem., $4, 2

SWINE,—LARGE BREEDS.

Large Breeds viz: Cheshire, Berkshire, Chester County Whites, Poland China, Large Yorkshire, weighing more than 300 lbs. at maturity.

For Boars, premiums, $5, 3
For Breeding Sows with their pigs by their side, premium, $5, 3
For Litters of Weaned Pigs, not less than four, between two and four months old, premiums, $5, 3

SWINE,—SMALL BREEDS.

Small breeds, such as Suffolk, Essex, Small Yorkshire, China, and any other breed or grade, weighing less than 300 lbs. at maturity.

For Boars, premiums, $5, 3
For Breeding Sows with their pigs by their side, premiums, $5, 3
For Litters of Weaned Pigs, not less than four, between two and four months old, premiums, $5, 3

SHEEP.

For flocks of Sheep, not less than ten in number, each Breed, premiums, $5, 3
For best Buck, premium, $5
For lots of Lambs not less than four in number between four and twelve months old, premiums, $4, 2

POULTRY.

For pairs of Fowls, Light Brahmas, Dark Brahmas, Buff Cochins, Partridge Cochins, Black Cochins, White Cochins,

Plymouth Rocks, White Plymouth Rocks, Dominiques, White Leghorns, Brown Leghorns, Dominique Leghorns, Black Spanish, Hamburgs, Polish, Games. Dorking, Bantams, Black, White and Mottled Javas, Wyandottes, White Wyandottes, Golden Wyandottes, Black and White Minorcas, Red Caps, Andalusias, Langshangs, and other recognized varieties, each variety, premiums, $1, .50

For pairs of Chickens of above varieties, premiums, $1, .50

For the best breeding pen of each variety—Diploma of the Society.

For the best pairs of Native Fowls, premiums, $1, .50

Pairs can be exhibited in "breeding pens," by marking the competing female (with a ribbon or colored string), which with the male will form the pair.

For lots of Turkeys, and Alesbury, Rouen, Caouga, Pekin, White and Colored Muscovy, and Brazilian Ducks, and Toulouse, Emden, Brown China, and African Geese, prem., $1, .50

Any exhibitor interfering with the Judges in the discharge of their duties, or interfering with, or handling any specimen on exhibition, other than his own, shall forfeit all claim he may have in the premium list.

All breeds exhibited separately and to be judged by the rules of the "American Standard of Excellence."

For best exhibit of Poultry Appliances, $4

NOTE.—Diploma only awarded for Breeding Pens.

STREET PARADE.

Invitation is extended to local tradesmen or others to have a street parade or procession of teams, in connection with the Fair, to be expended under the direction of the Committee in charge in premiums or gratuities, $50

PLOUGHING.

GENERAL NOTE ON PLOUGHING.—Stags are excluded. Teams must be entered in the names of their owners, and only double ox-teams to have drivers. A team consisting of one pair of oxen and a horse will be considered a double team. The owners of separate teams may unite the same and be allowed to compete for premiums. The ploughmen and drivers must have been residents of the County at least three months before the exhibition. Those who intend to be competitors must give notice to reach the Secretary on or before Saturday previous to the show. The lands will be staked, but each ploughman will be required to strike out his own lands in the presence of "Committee on Striking Out Grounds for Ploughing," after half-past nine o'clock on the morning of the trial. Ploughmen with land side ploughs are to back furrow three furrow on each side of the stakes set, the last furrow to be of the depth required in the class. Ploughmen with swivel ploughs, to turn the outside of their furrow to the stakes on one side, and to finish one foot from the stake on the other. Committees to note and report the kind of plough used.

PLOUGHING WITH DOUBLE OX-TEAMS.—One eighth of an acre, at least eight inches deep, premiums, $8, 6

PLOUGHING WITH SINGLE OX-TEAMS.—One-eighth of an acre, at least six inches deep, premiums, $6, 4

PLOUGHING WITH TWO HORSES.—With any form of plough except Swivel, one-eighth of an acre, at least six inches deep, premiums, $6, 4

PLOUGHING WITH THREE HORSES.—One-eighth of an acre, eight inches deep, without driver, premium, $6

Same with four horses, with driver, premium, $6

PLOUGHING WITH SWIVEL PLOUGH.—One-eighth of an acre, with double ox-teams, at least eight inches deep, premiums, $6, 4

One-eighth of an acre with single ox-teams, at least six inches deep, premiums, $6, 4

One-eighth of an acre with horse teams, consisting of two horses, ploughing at least six inches deep, premiums, $6, 4

PLOUGHING WITH SULKY PLOUGH.—For the best performances, taking into account ease of draft, amount and quality of work,

Sulky Plough, Landside, premiums, $6, 4

Ploughing by boys, 15 years of age and under, premiums, $6, 4

HARROWS.

For the best Harrow exhibited, and its merits shown by actual test upon the ploughed ground, $6, 4

NOTE.—Entry must be made with the Secretary before the day of the trial, with description of the Harrow.

AGRICULTURAL IMPLEMENTS.

For the best collection of Implements and Machines (no article offered in *collection* will be entitled to a separate premium), Diploma and $8

For implements that are deemed worthy, the Committee may at their discretion award in gratuities not exceeding $40

No premium or gratuity will be awarded for any Mower, Horse Rake, Tedder, or other machine or implement, the merit of which can be known only by actual trial in the field; but manufacturers are invited to offer the same for exhibition and inspection.

CARRIAGES.

For carriages built in the County, and exhibited by the manufacturer, Diploma, and twenty-five dollars in gratuities, may be awarded by the Committee.

In Exhibition Hall.

Committees on articles exhibited in the hall should be especially careful that the premium or gratuity cards issued with the names, and sums awarded them, correspond with those in their reports to the Society.

Committees and Exhibitors will be governed by instructions under heading of "Duties of Committee," "General Rules," "Premiums to be awarded at the Show," see first pages, and under "Fruit," "Domestic Manufactures," and "Flowers."

☞All Fruit, Flowers, Vegetables, and Domestic Manufactures, must be the product of Essex County, to be entitled to a premium or gratuity.

GRANGE EXHIBIT.

The Society offers fifty dollars to be divided in four premiums for exhibits by the different Granges in Essex County, as follows:—Premiums, $20, 15, 10

NOTE.—This exhibit includes all Fruit, Vegetables and Domestic Manufactures that are exhibited in any other department in Exhibition Hall.

DAIRY.

For specimens of Butter made on any farm within the County the present year, samples of not less than five pounds to be exhibited, with a full account of the process of making and management of the Butter, premiums, $5, 3

For specimens of New Milk Cheese, made on any farm in the County the present year, samples of not less than twenty-five pounds to be exhibited, with statement in writing of the method of making and preserving same, premiums. $5, 3

BREAD AND CANNED FRUIT.

For White Bread made of Wheat flour, premiums, $2, 1

For bread made from Graham flour, premiums, $2, 1

For bread made from other grains, or other grains mixed with wheat, premiums, $1.50, 1

All bread, entered for premiums, to be in loaves weighing not less than one pound each, and not to be less than twenty-four hours old, with a full written statement over the signature and address of the maker, stating the kind of flour used, quantity of each ingredient, how mixed, and length of time kneaded and raised, and how long baked.

For first and second best collection of Preserved Fruits and Jellies made from products of the County, *when premiums*

are awarded, the method of making to be sent to the Secretary by the Committee for publication, premiums, $2, 1

For the first and second best five pounds of Dried Apples, grown and dried within the County, with statements of process used and amount of labor and time required in preparing and drying, *such statement on premium fruit to be given to the Secretary for publication*, premiums, $2, 1

In addition to the above, are placed in the hands of the Committee for gratuities on other articles, entered in this department, products of this County, deemed worthy, $5

BEES, HIVES AND HONEY.

For the first and second best display of Bees, Hives, and Apiarian Implements, accompanied with a written description of the bees, hives, etc., number of hives in use, and amount of surplus honey taken from them during the season, premiums, $4, 2

First and second best Honey, five pounds in comb, made in the County, with statement signed of kind of bees and hive, and time of year when honey was made, premiums, $2, 1

Fruit.

All fruit must be entered in the name of the grower before 11 o'clock on the first day of the exhibition, and each exhibitor must certify to the same on the Entry Book, or on lists of the varieties of each class of fruit or to be filed when entry is made. (Committees are not authorized to make awards to those who do not comply with this rule.)

Tables will be labelled in a *conspicuous manner* by the hall committee *before the entry of exhibitors*, with the names of fruit, for which premiums are offered, all others of same class fruit to be labelled miscellaneous. Exhibitors must place their several varieties of each class of fruit where indicated by such labels, or be considered by the committee as not competing for premium.

Plates of collections of fruit, when premiums are offered therefor, must be entered and placed by the exhibitor on the table assigned for the exhibit of collections of fruit.

To entitle exhibitors to receive premiums and gratuities awarded, they are required (when requested by the committee) to give information in regard to the culture of their fruit.

PEARS.

For best twelve specimens of the following varieties, which are recommended for cultivation in Essex County : Bartlett, Belle Lucrative, Bosc, Anjou, Angouleme, Dana's Hovey, Lawrence, Onondaga, Seckle, Sheldon, Urbaniste, Vicar, Comice, Howell and Clairgeau, each, premium, $2

Doyenne d'Ete, Gifford and Clapp's Favorite (ripening early), are recommended for cultivation, but no premium is offered.

For each dish of twelve best specimens of any other varieties, deemed worthy by the committee, premium, $1.50

For best collection of Pears, recommended for cultivation, premium, $5

In addition to the above are placed at the disposal of the committee, to be awarded in gratuities of not less than $1 each, $15

APPLES.

For best twelve specimens of the following varieties, which are recommended for cultivation in Essex County : Baldwin, Danvers Sweet, Tompkins King, Red Russet, Tolman's Sweet, Hubbardston, Hurlburt, Porter, Pickman Pippin, Roxbury Russett, Rhode Island Greening, Gravenstein, Hunt Russett, Smith's Cider, Snow, Bailey Sweet, premium for each, $2

Red Astrachan, William's Favorite, Tetofsky and Sweet Bough are recommended for cultivation, but no premium is offered (ripening early)

For best twelve specimens of any other varieties deemed worthy by the committee, premium for each variety, $1.50

For best collection of Apples, recommended for cultivation, premiums, $3, 2

For best twenty-four specimens of any variety of Crab Apple deemed worthy by the committee, $1.50

In addition are placed at the disposal of the committee, to be awarded in gratuities of not less than $1 each, $15

PEACHES, GRAPES, AND ASSORTED FRUITS.

For best nine specimens of Freestone, White Flesh, Yellow Flesh, Essex County Seedling, each variety, $2

For best collection of Peaches, premium, $3

For Champion, Lemon, or Orange Quinces, premium, $2

For Plums, five varieties to be selected by Committee, each variety, premium, $2

For best four bunches of Concord, Worden's Seedling, Brighton, Green Mountain, Delaware, Martha, Moore's Early, Niagara Grapes, each variety, premium, $2

For Cold House Grapes, produced with not over one month's artificial heat, premiums, $3, 2

For best collection of ten varieties, not less than ten pounds in all, premium, $5

For best specimens of four bunches of Grapes, varieties other than above, deemed worthy by the committee, premium, $1.50

For baskets of Assorted Fruits, premiums, $3, 2

In addition are placed at the disposal of the committee, to be awarded in gratuities, of not less than 50 cents each. $20

Plants and Flowers.

RULES AND REGULATIONS.

1. All Plants and Flowers for competition and exhibition must be entered for examination by the committee on or before eleven o'clock, on the first day of the Fair, and all such Plants and Flowers must have been grown by the competitor, except native plants and flowers, and flowers used in bouquets, and baskets of flowers and floral designs, all of which (plants and flowers) must have been grown within the County.

2. When a certain number or quantity of Plants and Flowers is designated in the schedule, there must be neither more nor less than that number or quantity of specimens shown.

3. When only one premium from each exhibitor is offered for any article, only a single specimen or collection can compete, but when a second or third premium is offered, one, two or three specimens or collections may be exhibited for competition, but no variety can be duplicated.

4. No premium shall be awarded unless the specimens exhibited are of superior excellence, possessing points of superiority and worthy of such premium, not even if they are the only ones of their kind on exhibition.

5. No specimen entered for one premium shall be admitted in competition for another different premium.

6. Competitors will be required to furnish information (if the committee so request), as to their modes of cultivation, or in the case of Native Plants and Flowers, where such were found.

7. All Plants exhibited for premiums must have the name legibly and correctly written on stiff card, wood, or some other permanent and suitable substance and so attached to same as

to be easily seen. Flowers when specified to be named to comply also with above rule.

8. Plants in Pots to be entitled to premiums must show skilful culture in the profusion of bloom and in the beauty, symmetry and vigor of the specimens; also Bouquets, Baskets, Design Work, etc., must show taste, skill and harmony in arrangement, both as to colors and material they are made of, and purposes for which they are intended.

9. All Flowers exhibited must be shown upon their *own stem*, flowers in "Design" work alone excepted; and this exception if overcome and avoided, to be taken into account by the committee in awarding the premiums.

10. The Committee are authorized to award gratuities for any new and rare plants and flowers or "Designs of merit" for which no premium is offered, but in no case shall the total sum (premiums and gratuities together), exceed the amount, $100 00, limited by the Society for this department.

11. No member of the Committee for awarding premiums or gratuities shall in any case vote or decide respecting an award for which such member may be a competitor, or in which he may have an interest, but in such case such member shall *temporarily* vacate his place upon the Committee, and such vacancy for the time being may be filled by the remaining members of the Committee, or they may act without.

12. Attention is again called to above Rules and Regulations for Plants and Flowers, and General Rules of the Society, and all articles not entered in conformity therewith will be disqualified, and premiums will be awarded only to exhibitors who have complied with said Rules, etc.

PLANTS.

Plants competing for these premiums must have been grown in pots, Native Plants excepted, etc. See Rules.

For collection Flowering and Ornamental Foliage plants, at least 25 specimens, premiums, $5, 3

For collection Palms, at least 5 specimens, 5 varieties, premium, $1

For collection Ferns (cultivated), at least 5 specimens, 5 varieties, premium, $1

For collection Dracenas, at least 5 specimens, 5 varieties, premium, $1

For collection Crotons, at least 5 specimens, 5 varieties, premium, $1

For collection Fancy Caladiums, at least 5 specimens, 5 varieties, premium, $1

For collection Gloxinias, at least 5 specimens, 5 varieties, premium, $1

For collection Begonias, tuberous-rooted, at least 5 specimens, 5 varieties, premium, $1

For collection Begonias, 5 specimens, 5 varieties, prem., $1

For collection Coleus, 10 specimens, 10 varieties, prem., $1

For collection Fuschias, 5 specimens, varieties, premium, $1

For collection Cyclamen, 5 specimens, 5 varieties, prem., $1

For collection Geraniums, double, 10 specimens, 10 varieties, premium, $1

For collection Geraniums, single, 10 specimens, 10 varieties premium, $1

For collection Geraniums, fancy, 10 specimens, at least 5 varieties, premium, $1

For collection Hibiscus, 5 specimens, 5 varieties, prem., $1

For collection Carnation Pinks, 10 specimens, at least 5 varieties, premium, $1

For collection Calla Lillies, 5 specimens, premium, $1

For specimen English Ivy, premium, $1

For collection of wood of native trees in sections, suitable for exhibition, showing bark and the grain of the wood, all correctly named with botanical and common name, at least 50 varieties, each variety to be shown in two sections, one of which to be a cross section and neither to be more than four inches in length or diameter, premiums, $5, 3

FLOWERS.

For collection Cut Flowers, cultivated, 100 specimens, at least 50 varieties, named, $3, 2

For collection Cut Flowers, native, 100 specimens, at least 50 varieties named, $3, 2

For pair of Bouquets, for vases, green-house flowers, premiums, $1, .50

For pair of Hand Bouquets, green-house flowers, prem., $1, .50

For pair of Bouquets, for vases, of native flowers, prem., $1, .50

For pair of Bouquets, for vases, of garden flowers, prem., $1, 50

For Basket of green-house flowers, premiums, $1, .50

For Basket of Native Flowers, premiums, $1, .50

For Basket of Garden Flowers, premiums, $1, .50

For arrangement of Native Flowers and Autumn Leaves, premiums, $2, 1

For Floral Designs, choice cultivated flowers, prem., $3, 2

For Floral Designs, native flowers, premiums, $2, 1
For collections Japan Lilies, hardy, named, premiums, $2, 1
For collections Phlox, hardy, perennial, named, prem., $2, 1
For collections Pansies, at least 50 specimens neatly and artistically arranged, premiums, $2, 1
For collections of Native and Introduced Weeds, with common and botanical name attached, premiums, $2, 1
For twelve Dahlias, large flowering, at least six varieties, named, premium, $1
For twelve Dahlias, Pompon or Lilliputian, at least six varieties, named, premium, $1
For twelve Dahlias, single, at least six varieties, named, premium, $1
For twelve Petunias, double, at least six varieties, named, premium, $1
For twelve Gladiolas (spikes), at least six varieties, named, premium, $1
For twelve Japan Lilies, at least six varieties, named, premium, $1
For twelve Geraniums, double, at least six varieties, named, premium, $1
For twelve Geraniums, single, at least six varieties, named, premium, $1
For twelve Phlox, hardy perennial, at least six varieties, named, premium, $1
For twelve Cannas, at least six varieties, named, prem., $1
For twenty-four Carnation Pinks, at least six varieties, named, premium, $1
For twenty-four Verbenas, at least six varieties, named, premium, $1
For twenty-four Roses, at least six varieties, named, prem., $1
For twenty-four Garden Annuals, at least twelve varieties, named, premium, $1
For twelve Calendulas, at least two varieties, named, premium, $1
For twelve Asters, Double Victoria, premium, $1
For twelve Asters, Double, Truffaut's Peony flowered, premium, $1
For twelve Asters, Pompone, premium, $1
For twelve Phlox Drummondii, in variety, premium, $1
For twelve Nasturtiums, at least six varieties, premium, $1
For twenty-four Pansies, in variety, premium, $1
For twenty-four Zinnias, double, in variety, premium, $1
For twenty-four Marigolds, African, in variety, prem., $1

For twenty-four Marigolds, Dwarf French, in variety, premium, $1
For twenty-four Petunias, single, in variety, premium, $1
For display of Coxcombs, in variety, premium, $1
For twelve Scabiosas, in variety, premium, $1
For twelve Delphiniums, in variety, premium, $1
For twelve Dianthus (double, annual), in variety, prem., $1
For twelve Salpiglossis, in variety, premium, $1
For collection of Sweet Peas, premium, $1

VEGETABLES.

Rules for Fruit apply to Vegetables.

Beets—For best twelve specimens, Eclipse, Dewing, and Edmands, premiums, each variety, $2
Carrots—For best twelve, Short Top, Long Orange and Danvers Intermediate, premium, each variety, $2
For best twelve, Short Horn, Orange carrots, $2
Mangold Wurtzels—For best six specimens, premium, $2
Flat Turnips—Twelve specimens. For best Purple Top and White Flat, premium, each variety, $2
Ruta Bagas—Twelve specimens. For best Yellow and White, premium, each variety, $2
Parsnips—For the best twelve specimens, premium, $2
Onions—Twelve specimens. For best Danvers, Yellow Flat, and Red, premium, each variety, $2
Potatoes—Twelve specimens. For best Early Rose, Beauty of Hebron, Clark's No. 1, Pearl of Savoy, Early Maine, premium, each variety, $2
Cabbages—For best three specimens, Savoy, Fottler's Drumhead, Stone Mason Drumhead, Red Cabbage, All Seasons, Deep Head, each variety, premium, $2
For next best, each variety, premium, $1
Cauliflowers—For best three specimens, premium, $2
For next best, premium, $1
Celery—For best four roots, premium, $2
Sweet Corn—For twelve ears ripest and best Early, prem., $2
For best twelve Ears in milk, Late, premium, $2
Squashes—For best three specimens, Marrow, Turban, Warner Turban, Hubbard, Marblehead, Essex Hybrid, Bay State, Sibley, Butman, each variety, premium, $2
Melons—For best three specimens, Nutmeg, Musk, Cassaba, Salmon Flesh, each variety, premium, $2
For best two specimens Watermelons, premium, $2
Tomatoes—For best twelve specimens, Round Flat and Round Spherical, each variety, premium, $2

For exhibition of greatest variety of Tomatoes, premium, $2
Cranberries—For pecks of cultivated, premium, $2, 1
For collection of vegetables, not less than three of a kind, premiums, $4, 3
Placed at the disposal of the committee for whatever appears meritorious, $25

☞No competitor for premium to exhibit more or less number of specimens of any vegetables than the premiums are offered for.

Collections of Vegetables where premiums are offered for a number of varieties must be entered and placed, not less than three of a kind, by themselves on the tables assigned for collections. No collection shall receive but one premium. Specimens of any varieties, in such collections are not to compete with specimens of the same variety placed elsewhere. Exhibitors of such collections however, are not prevented from exhibiting *additional* specimens of any variety with and in competition with like variety. All vegetables must be entered in the name of the grower of them.

Size of Vegetables.—Turnip Beets to be from 2 to 4 inches in diameter; Onions, 2½ to 4 inches in largest diameter; Potatoes to be of good size for family use; Squashes to be pure and well ripened, Turban, Marrow, Hubbard, Marblehead, all to be uniform size.

GRAIN AND SEED.

For best peck of Shelled Corn, Wheat, Oats, Barley, Rye, Buckwheat and Field Beans, each, premium, $1
For twenty-five ears of Field Corn, premiums, $3, 2
For twenty-five ears of Pop Corn, premiums, $2, 1
For collections of Field and Garden Seeds, premiums, $6, 4
All grain or seed *must have been grown by the exhibitor in the County* to receive a premium.

Domestic Manufactures.

Contributors must deposit their articles at the Hall before 1 o'clock on the first day of the Exhibition. Articles not thus deposited will not be entitled to a premium. Gratuities will be awarded for articles of special merit for which no premium is offered; but no premium or gratuity will be awarded for any article manufactured out of the County, or previous to the last exhibition of the Society.

COUNTERPANES AND AFGHANS.

For Wrought Counterpanes having regard to the quality and expense of the material, premiums, $3, 2
Gratuities will be awarded for articles belonging to this department, the whole amount of gratuities not to exceed $25

CARPETINGS AND RUGS.

For carpets, having regard to the quality and expense of the material, premiums, $3, 2

For Wrought Hearth Rug, having regard both to the quality of the work and expense of the materials, premiums, $2, 1

Gratuities will be awarded for articles belonging to this department, the whole amount not to exceed $20

ARTICLES MANUFACTURED FROM LEATHER.

For best pair hand made and machine made Men's Boots, Women's do., Children's do., each, premium, $2

Best team, Carriage and Express Harness, each, premium, $3

$8 are placed at the disposal of this committee, to be awarded in gratuities.

For the best exhibition of Boots and Shoes, manufactured in the County, each, premium, Diploma of the Society.

MANUFACTURES AND GENERAL MERCHANDISE.

For display of Bonnets, premiums, $3, 2

For Horn Combs, not less than one dozen, premium, $1

At the disposal of the committee in this department, to be awarded in gratuities not exceeding $3 in any one gratuity, $15

FANCY WORK

Of Domestic Manufacture are not included in the above.

At the disposal of the committee in this department, to be awarded in gratuities not exceeding $3 in any one gratuity, $40

WORKS OF ART.

At the disposal of the committee in this department, to be awarded in gratuities not exceeding $2 in any one gratuity, $40

DECORATED CHINA.

At the disposal of Committee to be awarded in gratuities, not exceeding $2 in any one gratuity, $20

WORK BY CHILDREN.

For specimens of work performed by children under 12 years of age, exhibiting industry and ingenuity, premiums, $2, 1

At disposal of committee to be awarded in gratuities, $10

List of Premiums to be Awarded by the Trustees in November.

FARMS.

Competitors for this premium must give notice of their intention to the Secretary on or before June 15th, and the farms entered for premium will be viewed by the committee twice during the year. Crops growing on farms that are entered for premium, cannot be entered with another committee for separate premiums—except crop specimens exhibited at the fair.

Any person desirous of having *his farm inspected, without entering it for premium*, may make application to the Secretary, and it will be viewed and reported upon by the committee.

For the best conducted and most improved farm, taking into view the entire management and cultivation, including lands, buildings, fences, orchards, crops, stock and all other appendages, with statements in detail, relating thereto, premium, $20

IMPROVING WET MEADOW AND SWAMP LANDS.

For best conducted experiments relating to wet meadow or swamp lands, on not less than one acre, the course of management, and the produce, etc., for a period of two years at least, to be detailed, with a statement of all the incidental expenses, premiums, $10, 6

NOTE.—The Committee is instructed to ascertain how many, if any, reclaimed swamps in this County have been abandoned or have returned to natural grasses. Persons knowing of such, are requested to notify the Secretary or Committee.

IMPROVING PASTURE AND WASTE LANDS.

For best conducted experiments in renovating and improving pasture land, other than by ploughing, so as to add to their value for pasturage, with a statement of the same, premiums, $10, 6

For best conducted experiments in renovating and improving waste lands, so as to add to their agricultural value, with statement of the same, premiums, $10, 6

No premium to be awarded to any person for a repetition of an experiment in meadow, swamp or pasture lands, for which he has already received a premium.

UNDER-DRAINING LAND.

For best conducted experiments in under-draining land, regard being had to the variety of soil, sub-soil, and other local circumstances, premiums, $10, 6

NOTE.—The same instructions under "Improving Wet Meadow and Swamp Lands" apply to this Committee.

GRAIN AND OTHER CROPS.

Claimants on Grain and Root Crops will be required to state the size of the piece of land, when they enter, and conform to the following rules: Entries of Grain Crops, to be made on or before September 10th; Root Crops on or before October 10th; giving ample time for the crops to be examined by the committee before harvesting. Statement to be made in conformity with the following form, must be forwarded to the Committee previous to November 1st.

All calculations and figures given in reports of, and statements of Crops, are to be made on the *basis of an acre*, results in all cases, to be given at the rate per acre.

In pursuance of authority delegated to the Board of Agriculture by Chap. 24, of Acts 1862, Agricultural Societies receiving the bounty of the State, are required to make use of the following form, and be governed by its conditions in the mode of ascertaining the amount of crops entered for premium.

Essex Agricultural Society.—Statement concerning a crop of ————, raised by Mr. ———, in the town of———, ——, 1896.

What was the crop of 1894? What manure was used and how much? What was the crop of 1895? What manure was used and how much? What is the nature of the soil? When and how many times ploughed, and how deep? What other preparation for the seed? Cost of ploughing and other preparation? Amount of manure, in loads of thirty bushels, and how applied?

Value of manure upon the ground? How used? (What amount of Commercial Fertilizer used? How used? Value of same when applied?) When and how planted? The amount and kind of seed? Cost of seed and planting? How cultivated and how many times? Cost of cultivation, including weeding and thinning? Time and manner of harvesting? Cost of harvesting, including the storing and husking or threshing? Amount of crop, etc. Signed by ——— Competitor.

The committee, to whom is intrusted the award of the premiums on field crops, may award them according to their judgment, but for the purpose of furnishing accurate statistics for the benefit of agriculture, shall select certain of the crops, and require the owners thereof to measure the land and weigh the crops accurately, giving to the committee a certificate of the same, and give all possible information thereon over their own signatures, and return the same to the Secretary of the Society, to be published in the annual transactions.

In ascertaining the amount of crop, any vessel may be used and the weight of its contents once, multiplied by the number of times it is filled by the crop.

In measuring the land or weighing crops, any competent person may be employed, whether a sworn surveyor or not, and must give certificate.

The certificate shall state the weight of all crops only in a merchantable state.

In ascertaining the amount of a hay crop entered for premium, the measurement of the hay in the barn may be employed.

RULES OF MEASURE PRACTICED AND ADOPTED BY THE STATE BOARD OF AGRICULTURE.

Wheat, Potatoes, Sugar Beets, Ruta Bagas, Mangold Wurtzels,	60 lbs. to bush.
White Beans and Peas,	62 " "
Corn, Rye,	56 " "
Oats,	32 " "
Barley, Buckwheat,	48 " "
Cracked Corn, Corn and Rye, and other meal, except Oat,	50 " "
Parsnips, Carrots,	55 " "
Onions,	57 " "

1. For the best conducted experiments of Rye, not less than twenty bushels to the acre, fifty-six lbs. to the bushel, on not less than one acre, premiums, $7, 4

2. For best conducted experiments of Wheat, not less than thirty bushels to the acre, sixty lbs. to the bushel, on not less than one acre, premium, $7, 4

3. For best conducted experiments of Oats, not less than fifty bushels to the acre, thirty-two lbs. to the bushel, on not less than one acre, premiums, $7, 4

4. For best conducted experiments of Barley, not less than forty bushels to the acre, forty-eight lbs. to the bushel, on not less than one acre, premiums, $7, 4

5. For best conducted experiments of Indian Corn, on not less than one acre, premiums, $7, 4

6. For largest quantity and best quality of English Hay, on not less than one acre, regard being had to the mode and cost of cultivation, premiums, $7, 4

7. For best yield of Field Beans, on not less than one-half acre, and not less than twenty-five bushels per acre, premiums, $7, 4

ROOT CROPS.

1. For best conducted experiments in raising Carrots, fifty-five pounds to the bushel, premiums, $7, 4
2. For best conducted experiments in raising Parsnips, fifty-five pounds to the bushel, premiums, $7, 4
3. For best conducted experiments in raising Beets, premiums, $10, 5
4. For best conducted experiments in raising Ruta Bagas, sixty pounds to the bushel, premiums, $7, 4
5. For best conducted experiments in raising Mangold Wurtzels, sixty pounds to the bushel, premiums, $7, 4
6. For best conducted experiments in raising Sugar Beets, sixty pounds to the bushel, premiums, $7, 4
7. For best conducted experiments in raising Onions, fifty-two pounds to the bushel, premiums, $7, 4
8. For best conducted experiments in raising Potatoes, sixty pounds to the bushel, premiums, $7, 4
9. For best conducted experiments in raising Cabbages, premiums, $7, 4
10. For best conducted experiments in raising Squashes, premiums, $7, 4
11. For best conducted experiments in raising Summer English Turnips for the market, premiums, $7, 4

Raised on not less than half an acre, and the quantity of crop to be ascertained by weight; so far as practicable the crop to be free from dirt, without tops, and in a merchantable condition at the time of measurement.

Claimants for premiums on Grain and Root Crops must forward statement to chairman of committee *before Nov. 1st.*

FOREST TREES.

1. For plantation of either of the following species of forest trees, viz.: White Oak, Yellow Oak, Locust, Birch, White Ash, Maple, Walnut, or White Pine, not less than three years old, and not less than 1000 trees, premium, $10
2. For plantation of not less than 600 trees, premium, $8
3. For ornamental trees, ten or more set on any street, road or farm, and cared for five years, premium, $8

CRANBERRIES.

For best conducted experiment in the cultivation of the Cranberry, at least two summers, or not less than twenty rods of land, with written statement of the quantity and quality of the land, expense of planting, weeding and culture, and

amount of crops produced. Premium to be paid in 1895 and 1896, $10

For best experiment do., on not less than ten rods of land, premium, $7

STRAWBERRIES AND OTHER SMALL FRUITS.

For best crop of Strawberries, on not less than twenty rods of land, expense of planting, culture, crop, etc., stated in writing, premium, $7

For best crop of Currants, Raspberries and Blackberries, with statement as above, premiums, each, $7

NEW WINTER APPLES.

For a new variety of Winter Apple, originated in this County, equal or superior to the Baldwin, premium, $50

For a new variety of like character originating elsewhere, provided it has been cultivated in the County sufficiently to prove it equal or superior to the Baldwin for general purposes, premium, $20

For a successful experiment in destroying the codling moth and other worms destructive to the apple, premium, $20

NOTE.—Persons who consider themselves competitors will send Post Office address to Secretary, and others in the County wishing to compete for above, must notify Secretary, and furnish a full statement of their apple, and also scions when called for under his directions, to be tested by the Society.

SEEDLING POTATOES AND EXPERIMENTS.

For best Seedling Potato, originating in Essex County, to equal in yield, earliness and quality, the Early Rose, and to surpass it in one or more of these particulars, premium paid after three years' trial, $20

In testing the value of a Seedling Potato, the committee are instructed to take sworn testimony of the cultivator with regard to the yield, after having inspected the crop.

For the most satisfactory experiments to extend through five consecutive years, to settle the following facts relative to raising potatoes :—premium, $25

1st. Will whole, medium sized potatoes yield better results than pieces cut to two eyes ?

2nd. What will be the result of continuously planting small-sized potatoes of the same strain a series of years ?

3d. Difference between hilling and flat cultivation.

4th. Effect, if any, of cutting off seed ends before planting.

5th. Effects of deep and shallow planting.

6th. Raising from sprouts alone from same strain.

7th. Can potatoes having dwarf vines be planted nearer than others.

8th. Best distance apart for seed in the drill.

9th. To show the effect of covering the top with earth at several times after they had come up.

To be raised on not less than a half acre of land, uniform in character, and all to receive the same kind and quality of manure and cultivation, and to be inspected by the committee at the time of gathering the crops.

ESSAYS AND FARM ACCOUNTS.

The Essays must be transmitted to the Secretary by the 1st of November, with sealed envelopes containing the names of their authors, respectively, which shall not be opened by the committee, nor shall the names be known to the committee, until they shall have decided upon the merit of the Essay.

For original Essays on any subject connected with Agriculture, in a form worthy of publication, premiums, $10, 8

For best statement of Actual Farm Accounts, drawn from the experience of the claimant, in a form worthy of publication, premium, $8

For Reports of Committees upon subjects for which premiums are offered, premiums, $8, 6

Committee—G. L. Streeter, Salem; N. M. Hawkes, Lynn; D. E. Safford, Hamilton; Geo. E. Blodgette, Rowley; J. M. Danforth, Lynnfield.

LIBRARY.

Committee—Andrew Nichols, Danvers; Henry Brooks, Salem; B. P. Ware, Marblehead; J. M. Danforth, Lynnfield.

TREADWELL FARM.

Committee—Benj. P. Ware, Marblehead; C. C. Blunt, Andover; B. P. Pike, Topsfield; G. B. Blodgette, Rowley; George B. Bradley, Methuen; John M. Danforth, Lynnfield.

AUDITORS.

Committee—J. Hardy Phippen, Salem; Benj. P. Ware, Marblehead; E. Pope Barrett, Peabody.

FARMERS' INSTITUTES.

Francis H. Appleton, Asa T. Newhall, C. C. Blunt, O. S. Butler, John M. Danforth, Lynnfield.

DELEGATES.

From the Essex Agricultural Society to attend Exhibitions of Societies, Farmers' Clubs and Fruit Growers' Associations in Essex County, and report any information that shall seem valuable for publication.

The Secretary to be notified of the time of holding their exhibition, who will notify the chairman of Committee to assign Delegate.

COMMITTEES.

All committees, including committees to judge of crops, of exhibits at Fair, and of the arrangements for the Fair, are chosen by the Trustees at their June meeting.

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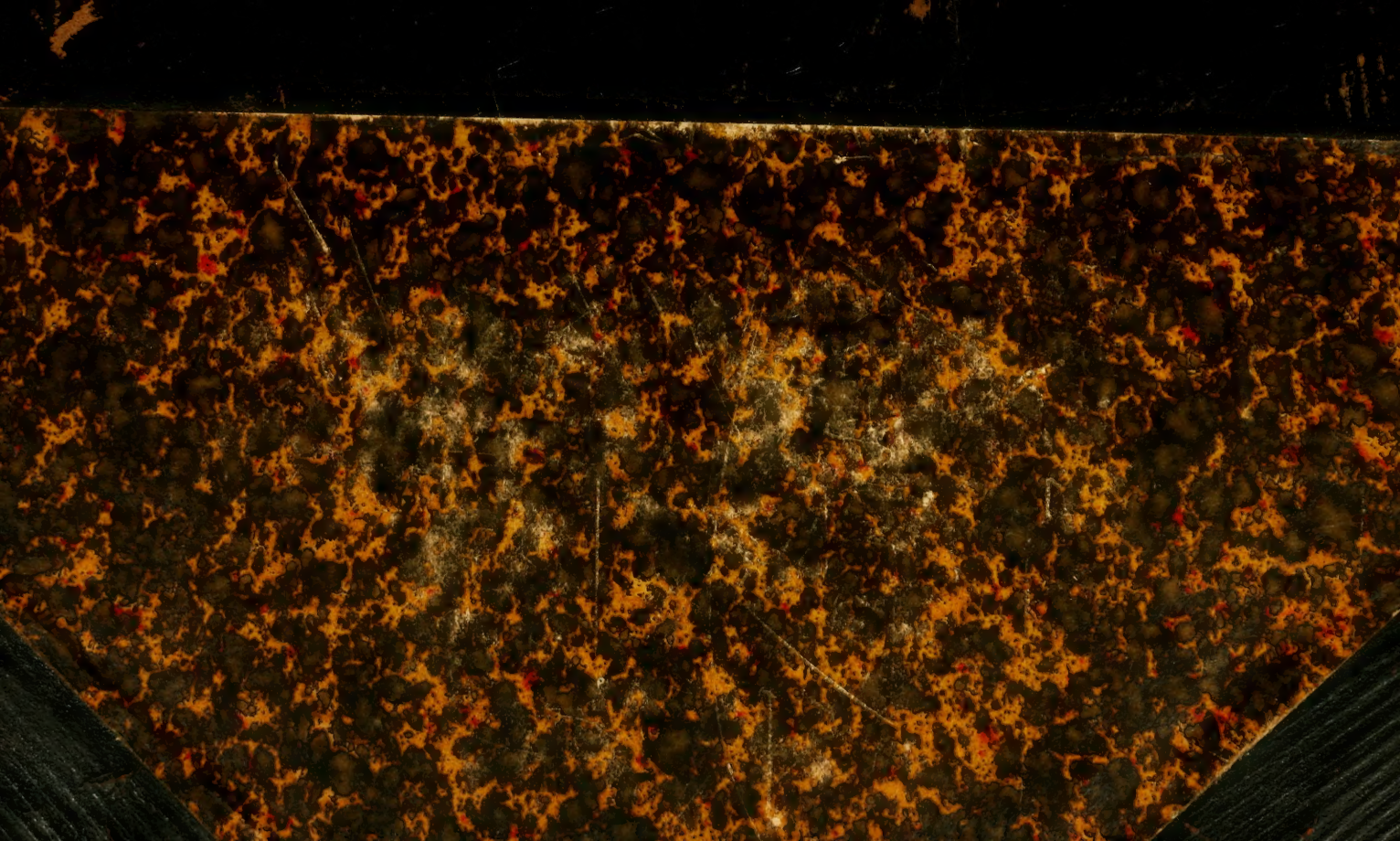
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